AZERBAIJAN RAPID HOUSING NEEDS AND DEMAND ASSESSMENT – BAKU PILOT

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Contents

Acknowledgments and Disclaimer

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Abbreviations

AMCGF – Azerbaijan Mortgage and Credit Guarantee Fund
MIDA – State Housing Development Agency
MD 3 – Microdistrict 3
MD 4 – Microdistrict 4
MFB – Multi-Family Apartment Building
MOE – Ministry of Economy
MOES – Ministry of Emergency Situations
SCUPA – State Committee for Urban Planning and Architecture

Executive Summary

Over the past five years, the World Bank provided analytical support on housing in Azerbaijan beginning with a diagnostic and evolving to provide inputs for a draft national housing strategy. The initial diagnostic work identified several concrete issues related not only to the existing housing stock but also to the fragmented government support to the sector. The findings remain highly relevant. Partially in response to these findings, the government drafted a National Housing Strategy. The Strategy emphasizes affordable housing provision among a host of other reforms important for improving housing sector performance.

The Government of Azerbaijan's Inter-ministerial Housing Commission requested additional World Bank support to understand the current demand and deficit for new housing units, particularly in terms of how the government should support improved access to adequate housing. The Housing Commission is comprised of various government stakeholders that support the housing sector. A part of the Commission's mandate is to coordinate actions necessary for the development of affordable housing. To fulfill this mandate, the Commission sought to better understand housing demand drivers in Azerbaijan, as well as to better understand the total deficit of housing units in the country. To support the Commission, the World Bank undertook the stocktaking of existing information and designed this rapid housing needs and assessment to fill a part of a critical information gap. The assessment was piloted in two districts of Baku.

Dramatic decreases in poverty and unemployment since 2010 combined with increases in housing construction have improved housing conditions for many families. Since 2010, Azerbaijan has seen substantial decreases in poverty as unemployment dropped. Over the same period, Azerbaijan added an estimated 200,000 urban households of which 48,000 were in Baku. In response to growing income and increasing population, the housing sector added eighteen million square meters of housing, or an additional twelve percent, to the housing stock. In Baku, this translated to about 36,000 housing units and 180,000 units across the country. The difference between new household formation and delivery of new units suggests a small deficit of approximately 20,000 units nationally with the majority of unmet needs (12,000 units) in Baku. National overcrowding statistics suggest that another 530,000 units are inadequate to meet household space requirements of at least ten meters squared per person. It is unclear whether all of these units need to be replaced but it does imply that there is a housing condition issue. A clear definition of adequate housing and a detailed approximation of poor condition units would likely significantly increase the housing deficit.

Although the overall picture has improved, the stocktaking revealed affordability issues, particularly in Baku and Sumgait, indicating a mismatch between household income distribution and market pricing of new supply. Analysis of current income data and market pricing information suggests that just 9 percent of households in Baku can afford to buy a 50 square meter housing unit. In Sumgait, about 33 percent of households can afford a market-rate unit. This suggests that in both Baku and Sumgait housing supply is unaffordable to a large share of households. Other large cities did not exhibit issues with affordability at this scale.

To provide more clarity about housing conditions and improve data collection in the sector, the World Bank developed and piloted a rapid assessment tool. The tool includes three parts: semi-structured stakeholder interviews, visual building assessments, and a household survey. The tool is an extension of past World Bank surveys and analyses in Azerbaijan. The tool is designed to provide a more flexible and less expensive approach to data gathering than previous analyses. If systematically used, this tool would allow the Housing Commission to continue monitoring and assessing housing sector development. The tool was developed and piloted in two districts of Baku (Nasimi and Khatai). The districts were chosen because they contain a variety of housing typologies, particularly pre-1990 multifamily apartment buildings, that past work identified as problematic.

The rapid assessment in the two districts confirmed that a large share of pre-1990 Multi-Family Apartment Buildings (MFB) and informal single-family houses are deteriorating and that households

lack the necessary resources to mitigate the deterioration. Overall, most households were satisfied with their current housing unit; however, households in pre-1990 multifamily apartment buildings highlighted issues with the maintenance and quality of the common areas of the building. A visual assessment suggested that approximately 95 percent of the assessed pre-1990 MFBs are in need of renovation and retrofitting. This finding is consistent with households in pre-1990 MFBs reporting widespread issues with water intrusion, basement flooding, and sewerage back-ups indicating growing structural issues. Meanwhile, temporary housing and houses built on protected land are all in poor or hazardous conditions. All of these households likely need to be relocated. The conditions are more mixed with other types of informal housing and there may be an opportunity to upgrade neighborhood conditions. Based on visual assessments and stakeholder input, a small share of buildings needs to be demolished but this could change if aggressive capital improvement and management programs are implemented. Preliminary estimates suggest that the cost of capital-intensive renovations would be about one-third the cost of replacement. Pursuing renovations proactively now rather than deferring renovations for later would mean significant savings as compared with building new replacement units.

The next ten years offer a critical window of opportunity for the government to avoid increasing housing deficits by adjusting the current programmatic support to the sector to include a focus on the backlog of repairs. Current government housing programs for new housing acquisition are not available and/or accessible for low-income households. Low-income households live in many types of housing including pre-1990 multifamily apartment buildings and informally built single-family units. A government roadmap to improve housing conditions could scale up the use of the tool piloted in two neighborhoods to the rest of Baku and other areas experiencing housing issues. Using the outcomes of the evaluation, the government could then adjust support to the sector to encourage more private investment in renovating existing units and building low-income housing. Support could include information campaigns, property management regulations, financing for large building renovations, and subsidizing upgrades for the lowest-income residents. In contrast, continued inaction could lead to much larger housing deficits and widespread demolition.

The government may consider the following series of actions to further support the housing sector. To effectively address the current and potential future housing deficit, the Government may consider prioritizing four areas. First, scaling up the housing demand and needs assessment while strengthening housing sector data management. Second, addressing the backlog of repairs in order to not lose a large share of the existing multifamily apartment buildings, particularly the pre-1990 multi-family apartment buildings. Third, upgrading the existing informal single-family houses to the maximum extent possible and relocating houses in hazardous areas. Fourth, and in the more medium term, the Government may consider systematically addressing the constraints on housing supply while improving access to finance from commercial banks and subsidies for low-income households. The World Bank stands ready to support the government in pursuing such priority areas.

Introduction

Housing markets in Eastern and Central Asia are characterized by high homeownership and widespread deferred maintenance and Azerbaijan is no exception. Across the region, homeownership is above 90 percent in most countries. Widespread privatization of pre-1990 multifamily apartment buildings (MFB) did not provide robust mechanisms for building maintenance and repair. In response, many countries tried to institute homeowner's associations that could help owners save to make large repairs. Unfortunately, these associations have not provided the expected benefits and many households continue to face declining housing standards. Azerbaijan faced a similar situation with deteriorating buildings and responded by creating homeowners associations (HOA). Nonetheless, HOAs continue to struggle to access resources for maintenance and operations. Despite the formation of HOAs, pre-1990 MFBs remain undermaintained as the apartment owners lack the resources needed to fully carry out decades of deferred maintenance. At the same time, there is an expectation that should anything serious happen to the building, such as the roof collapsing, the government would step in to help. As part of the impressive economic growth cycle through the early 2000s, the housing sector expanded dramatically and the government supported the redevelopment of many older housing units and facade beautification.[1] These newer post-1990 buildings were built following modern construction practices and have always been fully privately owned and relied on fully private maintenance resulting in fewer housing condition issues.

Over the past 5 years, the World Bank has provided analytical and technical support to Azerbaijan that identified major challenges in the housing market and informed the development of the draft Housing Strategy by the government. The Government of Azerbaijan is currently working to launch the housing strategy. Past analysis identified issues including deteriorating pre-1990 MFBs, unmitigated earthquake risks, underdeveloped rental markets, large numbers of unregistered buildings, limited housing finance, and fragmented institutional management (See Appendix 1 for more detail). In the past, the World Bank has not been able to estimate the scale of each of these issues suggesting the need for better data monitoring and analysis, particularly of housing demand drivers. Nonetheless, the overall findings and general policy advice remain entirely consistent with the current analysis.

As the government moves toward approving and implementing the Housing Strategy, the Housing Commission requested World Bank assistance in undertaking a housing demand and needs assessment across all income groups. The Housing Commission is led by the Ministry of Economy and is comprised of the State Housing Construction Agency (MIDA) for social housing construction, the Azerbaijan Mortgage and Credit Guarantee Fund (AMCGF) for mortgage loans, the State Committee for Urban Planning and Architecture (SCUPA) for spatial planning and architecture, and the Ministry of Emergency Situations (MOES) for emergency response to households. The Commission was particularly interested in understanding how many housing units the government needed to build to meet the identified deficit. As a first step, the Bank team undertook a stocktaking of existing data to determine if there was adequate data to assess housing demand and resulting deficits.

The data stock-taking revealed a small quantitative shortage but an unknown qualitative deficit associated with the number of households living in overcrowded units or in units in poor condition due to deferred maintenance of the existing stock. Azerbaijan's consistent population growth and impressive economic redistribution drove increased demand for housing across the country over the last twenty years. In response, the housing market delivered an impressive number of units indicating small quantitative deficits. At the same time, the lack of information on housing vacancy rates makes it difficult to assess the degree to which new supply has been used by households seeking housing. In many countries in the region, vacancy rates, especially in large cities, may be high as investors purchase housing and hold it vacant. Additionally, it is not possible to assess the number of units in poor condition using existing data. As a result, data gaps

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[1] Buildings constructed before 1990 are well known to have structural and deferred maintenance issues. The recommendations therefore relate specifically to this housing rather than housing built more recently that was constructed without full building registration. The Government of Azerbaijan has taken action to register a majority of these unregistered buildings.

related to housing conditions and current occupancy make it difficult to precisely estimate current housing deficits in Azerbaijan or Baku.

Given the data gaps, the Bank and the Housing Commission agreed to develop and pilot a rapid housing market assessment tool in two districts of Baku. The aim is to improve the governments' understanding of housing conditions and therefore better assess demand for new or renovated housing units. In order to meet the initial goal of determining the full housing needs across the country, the tool would need to be scaled up by the government to cover a wider geographical area. The tool consists of three parts: (i) a series of semi-structured interviews with key housing sector stakeholders; (ii) a household survey; and (iii) a visual building assessment. The combination of these approaches provides a more comprehensive view of housing conditions and, if scaled up, would provide the information necessary to make more informed policy and programming decisions about housing. At the same time, each of the tool's parts could be used in isolation based on available funding or specific program goals.

The following report details the results of the stocktaking and the pilot as well as lays out a roadmap for the government to further develop a more holistic housing program. The first section provides a theoretical framework for estimating housing demand with reference to how other countries have used detailed housing demand analyses to adjust housing policy. The second section assesses the key drivers of housing demand in Azerbaijan based on the stocktaking exercise in early 2020.[2] The third section reviews the findings from the stocktaking revealing a small quantitative housing deficit, unknown housing condition issues, and a housing affordability challenge in both Baku and Sumgait.[3] The fourth section reviews the pilot housing market assessment methodology and outcomes in the Khatai and Nisimi districts of Baku. The pilot shows many residential buildings are teetering on the edge of major disrepair that could create a glut of irreparable and potentially dangerous housing in the next ten to fifteen years. To prevent this situation, the government and the private sector would need to work together to take swift action. The fifth and final section suggests a roadmap forward, particularly in the face of the unfolding crisis related to COVID-19.

1. Measuring Housing Demand and Deficits

Theoretical Framework

Measuring housing demand and deficits requires estimating demographic trends and housing conditions. The single largest driver of housing demand is demographics, which determines new household growth. Another important, but difficult to measure, driver of housing demand is the condition of the housing stock. Tracking the condition of housing often involves a subjective analysis of what constitutes an adequate unit. Definitions of adequacy range widely across the globe from access to secure tenure to the size of the housing units per capita. With a clear understanding of adequacy, it is possible to determine the number of units that are low quality and in need of replacement or renovation. Finally, some share of housing units will always be vacant as they are repositioned for new households which is known as the vacancy factor. Total demand is then the sum of new households, low quality and/or overcrowded units, and some necessary vacancy factor.[4] Estimating the housing deficit requires calculating the difference between the total housing demand (i.e., the backlog of households lacking adequate housing plus new households entering the market)

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[2] Note that the project experienced delays due to the COVID-19 pandemic that reduced the team's ability to conduct fieldwork or consult with counterparts. The impacts of the COVID-19 pandemic on the housing market are still unfolding therefore some of the existing data analysis may be more out of date than can be accounted for in this report.

[3] These findings may have changed due to rapidly changing pricing as the effects of the pandemic unfold. Nonetheless, the results from the household survey indicate that many households are facing increased issues paying rent and experiencing unemployment since the start of the COVID-19 pandemic.

[4] For more information and an excellent description see Blesky E. et al (2007). Projecting the Underlying Demand for New Housing Units: Inferences from the Past, Assumptions about the Future. Working paper W07-07 by the Joint Center for Housing Studies at Harvard University.

and the delivery of new units. Calculating delivery of new units ideally accounts for new construction, units removed from the housing stock, and those held vacant for use as second homes or other uses. Demographic changes such as decreasing household size, income growth, and mortgage availability all affect housing demand and can be estimated when sufficient data is available.

Demographics heavily influence the number, type, and location of housing demanded. In particular, the formation of households by various age groups drives new demand for housing. This is calculated using the share of the population identified as heads of households by age group, known as the headship rate. If the headship rate is greater than population growth for a given age bracket then housing demand is increasing. It is important to note that headship rates are affected by a large range of factors including the amount of housing supply. This implies that headship rates are highly correlated with housing supply but not necessarily caused by the amount of or type of supply available. Nonetheless, a detailed breakdown of households by age and size provides general insight into what types of housing units are needed. Young households often have different preferences for unit sizes and location than older households. Fully understanding the difference in these preferences requires detailed tracking and surveys.

The condition of housing is also a factor in projecting housing needed. Housing units deteriorate without significant investment. At the same time, consistent investment can reduce the effective age of a building and extend its useful life. Continued investment reduces the chance of a building becoming physically obsolete. Measuring this investment can be difficult because it requires understanding household and investor-level decisions. The actual age of a building often is used in place of this difficult to obtain information. A housing unit that is over a certain age, often 80 years old, is considered physically obsolete and in need of replacement.[5] Another important indicator of housing condition is overcrowding, which can be measured in several ways: space per capita, people per room, or co-habitation by multiple households in one housing unit. These measures of overcrowding will indicate pent-up demand for new housing units. Finally, in many countries lack of access to basic services is an important indicator of housing conditions Given the importance of housing conditions in household decision making it is important to better understand household preferences and the exact deficiency in the existing housing stock.

Economic conditions and financing terms dictate the affordability of housing units. The availability and terms of mortgage financing influence a household's ability to afford a new housing unit or renovate their existing unit. Similarly, economic growth and income distribution are also important indicators of whether or not households can afford to buy a housing unit. If a housing market has a large number of low-income households, demand for lower-priced housing units will increase. These drivers may also have a large influence on whether a household is searching for a unit to own or to rent.

Analyzing these drivers reveals the challenges and opportunities in a housing market. Some of the most important challenges facing housing markets are the direct result of housing demand as shown in Figure 1. Affordability issues are revealed through a combination of housing stock and economic issues. Location issues are revealed through demographic information that shows population growth or decline in cities or rural areas. Low-quality housing, seismic risk, and flooding risks all relate to issues with the condition of existing housing stock. Each of the challenges also presents opportunities for policy reform, provision of new units, or improving the existing stock.

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[5] Note that age is used as a proxy in countries as different as the United States of America and India.

Figure 1: Housing Demand Drivers and Outcomes
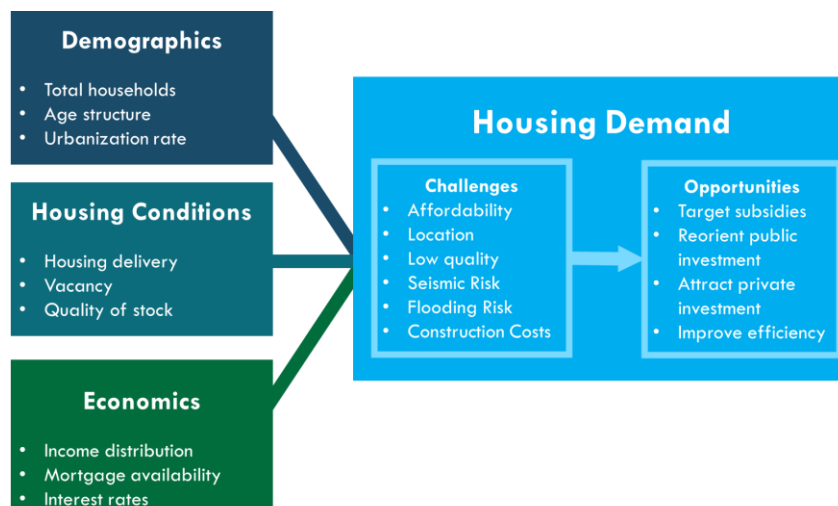
Other countries identify housing demand issues to better target their housing policy and develop specific programs. For example, Hungary started to offer housing subsidies to households with children as a response to identified demographic challenges and a high ownership rate that made it impossible for young families to enter the market.[6] In Poland, much of the multifamily apartment building stock was outdated and inefficient. Maintaining the housing stock created fiscal challenges because heating costs were so high due to the energy inefficiency of the buildings. In response, the Polish government-subsidized energy efficiency upgrades for multifamily apartment buildings. To date, 20 percent of housing units have been upgraded reducing costs for heating.[7] Finally, in France, a housing demand assessment revealed that a large rental subsidy program was inadequately targeted. Leakage of subsidies to higher-income households left low-income households with inadequate housing options. The French government took a very unpopular decision to reset subsidy levels to reduce leakage to higher-income households and better support low-income households.[8]

Assessment Methodology

Assessing housing demand requires assembling data from the national census, specialized housing surveys, and household budget surveys. Demographic data related to population growth, household headship rates by age group, and projected growth are often found in national census data. Information about individual housing conditions, such as overcrowding and access to services, is often obtained from the national budget survey. Information about the state of the existing housing stock, the stock and flow of housing units, and vacancy rates often need to be collected through specialized surveys. These specialized surveys can be conducted at the national, state, regional, or city level. There is no standardized approach to collecting this information.

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[6] Hegedüs, J, M. Elsinga and V. Horváth. (2016) Policy Discussion Brief for the European Commission on housing in EU member states. Habitat for Humanity. Accessed in October 2020:
https://www.habitat.org/sites/default/files/EMEA%20Policy%20Brief%20on%20Housing%20in%20EU_24112016.pdf

[7] Geroházi, É. And H. Szemzo (ND). "National Subsidies for renovation of Multifamily Buildings in Poland". Habitat for Humanity. Accessed in October 2020: https://getwarmhomes.org/national-subsidies-for-renovation-of-multifamily-buildings-in-poland/

[8] Housing Europe (2019). The State of Housing in the EU 2019: Decoding the New Housing Reality. Brussels: the European Federation of Public Cooperative and Social Housing. Accessed in October 2020:
https://www.housingeurope.eu/resource-1323/the-state-of-housing-in-the-eu-2019

Specialized surveys are often used to supplement the information available from other sources. Some countries collect quarterly or annual information about market trends and demand for housing from industry experts, such as brokers and developers. Other countries collect information about the housing stock to estimate deferred maintenance, safety, and seismic issues. Finally, some countries interview individual households to get insight into their satisfaction with their housing conditions. In many cases, this type of information could be added to an existing household budget survey instrument.

To fully understand housing supply and demand, it is important to include views from not only households, but also contractors, developers, property managers, and real estate brokers. The system of housing construction in a given country requires a range of supporting functions, rules, and regulations. How this system works cannot be fully understood from a household survey. In addition to gaining insight from households, it is also important to understand the issues facing some of the key housing actors. Contractors and developers are critical stakeholders because they can reflect on construction costs, housing stock issues, and what type of demand they see for upgrades. Real estate brokers understand pricing and the stock of available units. Finally, local government officials influence many of the rules and regulations for housing and additionally bring good awareness of recent demographic shifts.

The range of assessment methodologies underscores the difficulty of assessing housing conditions comparably across a variety of cultural norms and economic conditions. For instance, in many low-income countries, limited access to basic services is a good indicator of poor housing conditions and is often used to estimate the number of houses that need to be replaced. In contrast, in many high-income countries, overcrowding or deteriorating buildings are key factors in estimating housing need. The difference between countries means that the measurement of housing conditions varies widely across the globe.

2. Stocktaking of Existing Data in Azerbaijan

This report draws from a database of existing statistics assembled from various government data sources as part of an initial stocktaking. The Government of Azerbaijan provided information on a range of data (see Appendix 2 for the full data request and availability in Azerbaijan). The statistical information came from a range of sources including the National Census, the National Household Budget Survey, the State Committee for Urban Planning and Architecture, and the National Mortgage Fund. The data provided an overview of basic demographic and economic information but several key pieces of information were missing as discussed below. The stocktaking provided useful insight into demographic and economic drivers but revealed significant data gaps related to the condition of the housing stock.

Demographic Drivers

Between 1990 and 2018 Azerbaijan's urban population grew by 1.4 million people, suggesting demand for approximately 330,000 new units over the period. Figure 2 shows that between 1990 and 2018 the total population in Azerbaijan increased by approximately 2.8 million. Rural areas grew slightly faster than urban areas resulting in a small drop in the urbanization rate from 54 percent to 53 percent. Despite the small change in the urbanization rate, the absolute growth of the urban population increased from 3.8 million to 5.2 million people. Assuming an average household size in urban areas of 4.2 people, this would equate to demand for an additional 330,000 units spread across the countries eleven cities.[9]

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[9] Number of new households was estimated using national statistics on the average household size in urban areas.

Figure 2: Azerbaijan Population Growth, 1990 to 2018
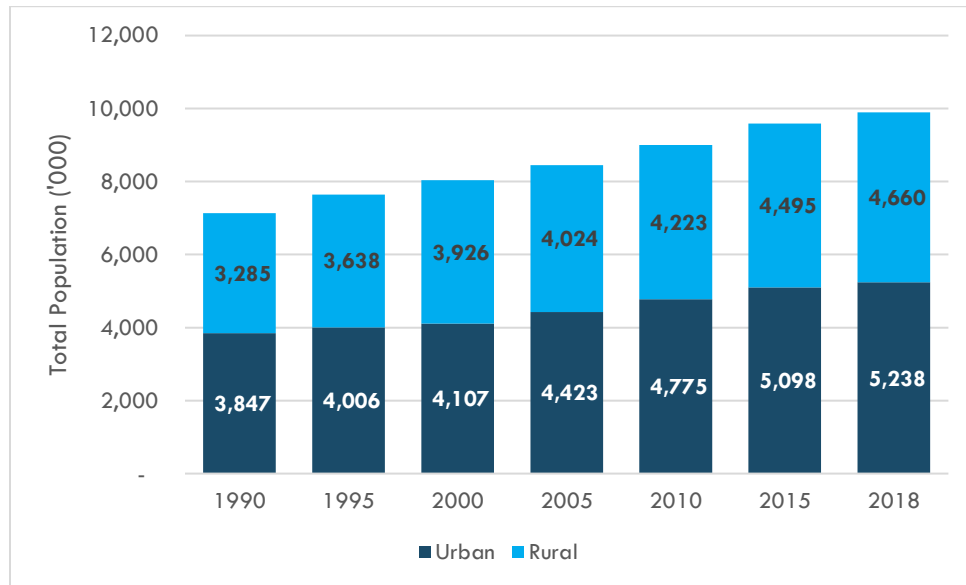
Source: State Statistics Committee in Azerbaijan

The population in the four largest cities increased by approximately 240,000 residents between 2010 and 2018, accounting for 27 percent of the national population increase. Figure 3 further highlights that Baku had by far the largest absolute increase in population over the period. Baku's total population increased by 185,000 residents to a total of 2.3 million people. Using estimates of household size in each city, the population increase suggests an additional 60,000 households in need of housing units. Although it is not clear how many vacancies each city had at the start of this expansion, most of the new households likely demanded a new unit. Therefore, the population increase, particularly in Baku, implies increased demand for housing units. Baku's built-up area increased by nearly 5,000 hectares between 2000 and 2014 with rapid expansion in the northwest towards Khyrdalan. At the same time, more than 40 percent of the change in land use was due to infill development across the city. It is not clear how much of the infill development was for housing but overall population density declined between 2000 and 2014 suggesting that the city was expanding to accommodate more single-family housing demand. [10]

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[10] Angel, S. et al (2016). Atlas of Urban Expansion – 2016 Edition: Volume 1: Areas and Densities. Accessed data for Baku in October 2020: http://atlasofurbanexpansion.org/cities/view/Baku

Figure 3: Large Cities Population Growth, 2010 - 2018
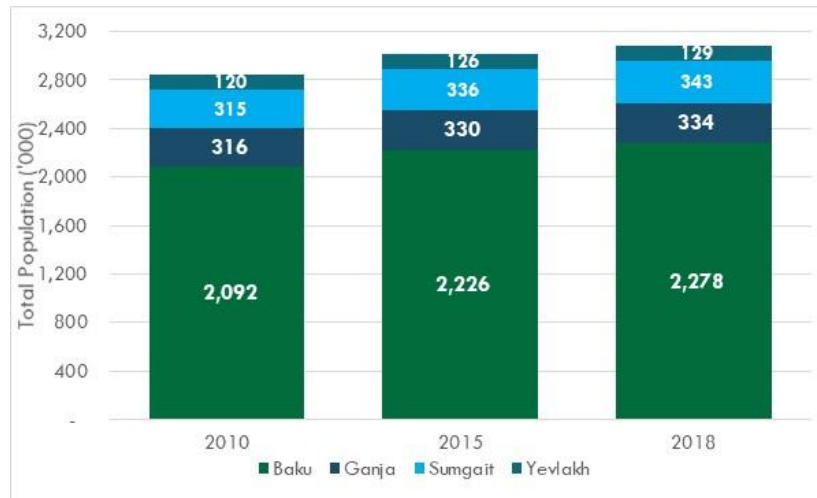
Source: State Statistics Committee in Azerbaijan

A rough calculation of future demand suggests 300,000 – 600,000 new household units will be needed over the next 5 years. Azerbaijan does not provide population projections making exact estimates of future demand impossible. To work around this data gap, we can assume that a portion of the people between the ages of 15 and 24 will form households in the next 5 years. In urban areas, there are currently 1.3 million people between 15 and 34 years old. Although government statistics don't provide insight into the current headship rate, or the ratio between households and people in that population group, a rule of thumb is that between 30 percent and 50 percent of individuals in this age range will become household heads. As a result, a rough estimate of future demand is 300,000 and 600,000 units. Furthermore, as shown in Figure 4 approximately a third of the population in large cities is between 30 and 50 years old which is the group most likely to trade smaller well-located units for larger family-friendly units further from the city center. Yet, with the current information, it is impossible to make even rough estimates of what share of this population would like to move to larger units with more family amenities.

Figure 4: Age Distribution, 2018
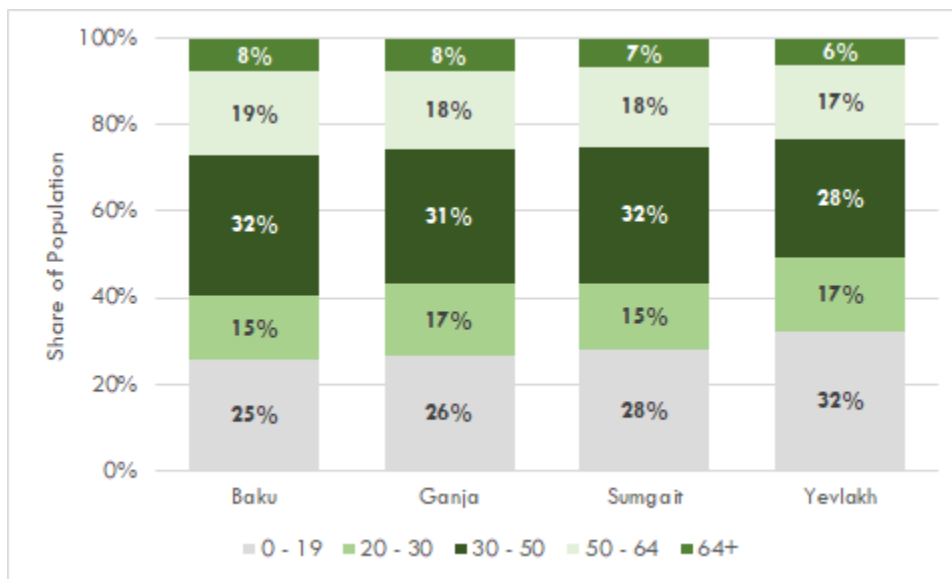
Source: State Statistics Committee in Azerbaijan

Housing Conditions

Urban households have very high access to utility services indicating a basic level of adequacy. As shown in Figure 5, access to piped water and sewerage is very high in the largest cities. Yevlakh is an exception with lower access to sewer connections. Access to electricity is also universal in these cities. In contrast, access to central heating is mixed across the largest cities. This likely indicates the use of other forms of heating more than it does a deficiency in basic utilities or overall housing conditions. While connections to utilities are high in all of the cities, the data does not provide insight into the quality or reliability of service connections. The reliability of service connections was repeatedly mentioned during the pilot study discussed below.

Figure 5: Access to Services in Large Cities
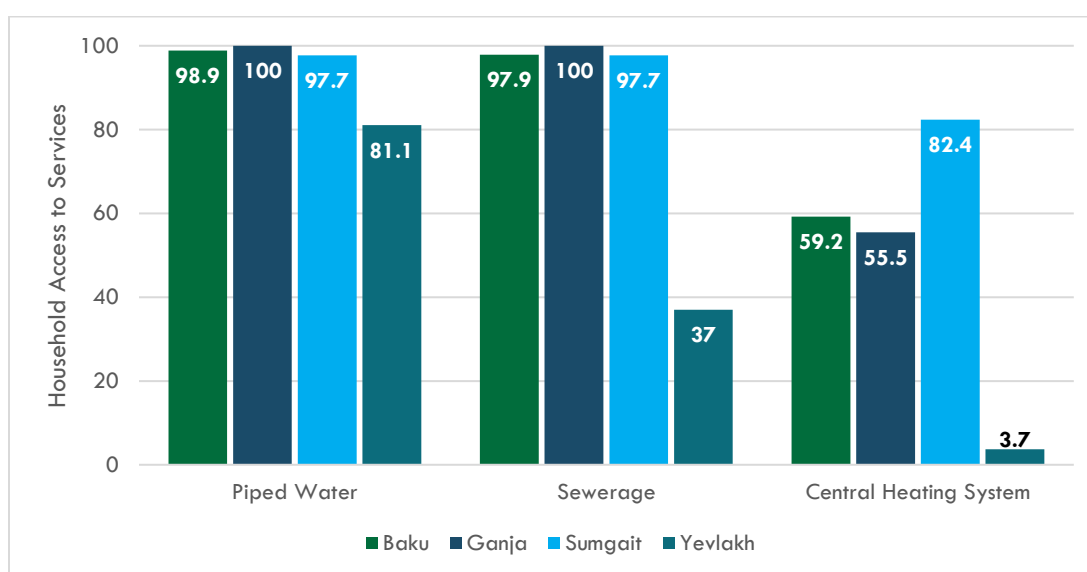
Source: State Statistics Committee in Azerbaijan

Nationally overcrowding rapidly declined between 2001 and 2019. Figure 6 shows that from 2001 to 2019 the share of all households living in overcrowded conditions, measured as those with fewer than 10 meters per person, decreased from 47 percent to 26 percent. The national decrease in overcrowding reflects an increase in the housing stock. Between 2001 and 2019 Azerbaijan added an estimated 400,000 new housing units that were often larger than older Soviet-era units.[11] Data limitations made it difficult to understand trends at the city-level. Furthermore, these trends don't account for vacancies, particularly in Baku. Finally, other measures such as people per room or co-habitation were not possible to evaluate.

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[11] Data provided by the State Statistics Committee reported total national dwellings which refers to all housing units. At the regional or city level, data was available for the number of residential buildings. As some residential buildings contain multiple housing units, estimating the delivery and demolition of housing units over time at the city level was very difficult. To estimate the number of dwelling units, data tracking total square meters of new housing construction was divided by the average size of a housing unit.

Figure 6: National Distribution of Households by Square Meters per Person, 2001 - 2019
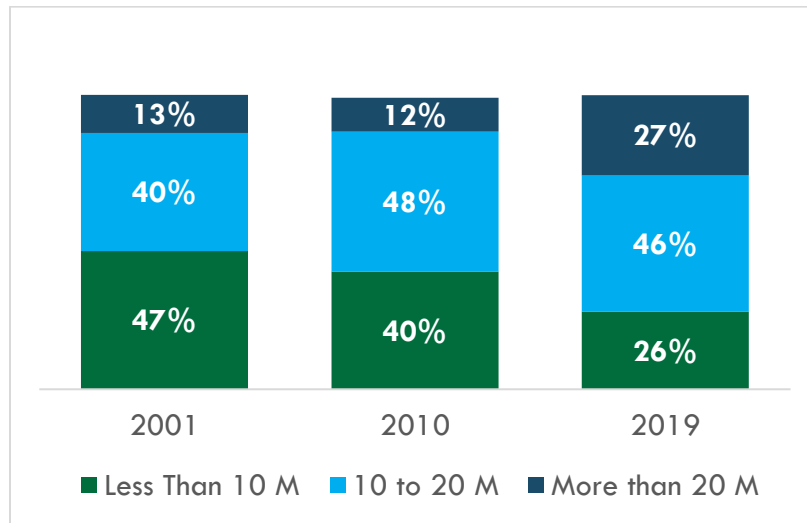
During the 2010 to 2018 construction boom, the largest net increase in housing space was in Baku. Figure 7 demonstrates that between 2010 and 2018 Baku added nearly 3.8 million square meters of housing space, an increase of approximately 11 percent. The construction boom occurred at the same time as an unknown number of units were demolished so it is difficult to determine the effect it had on the total number of housing units in Baku. Not all construction was in Baku. Baku only accounted for 20 percent of the 18 million square meters added nationally indicating construction was spread across the country. The other large cities only accounted for another 4 percent of the national increase indicating that a large share of new housing construction was outside the large urban centers.

Figure 7: Change in Housing Square Meters, 2010 - 2018
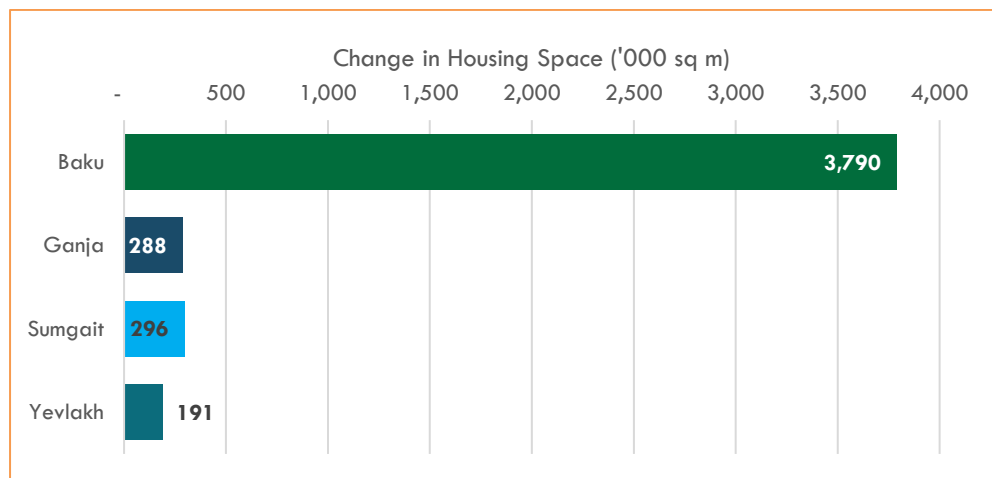
The data on residential building permits tells a slightly different story, where Baku accounts for a very high share of new formal construction. Figure 8 reveals that between 2015 and 2018, there were between

145 and 165 permits per year for residential construction across the country.[12] A majority of the permits were for Baku. Then permits dropped in 2019 to 110, with just 85 in Baku. This data does not account for all housing units, particularly for informal single-family homes, but indicates that construction may be slowing in the formal sector in Baku.

Figure 8: Residential Building Permits, National vs Baku, 2015 - 2019

Source: State Committee for Urban Planning and Architecture

Data were not available to assess the known issues with deferred maintenance and safety. Past studies in Azerbaijan and the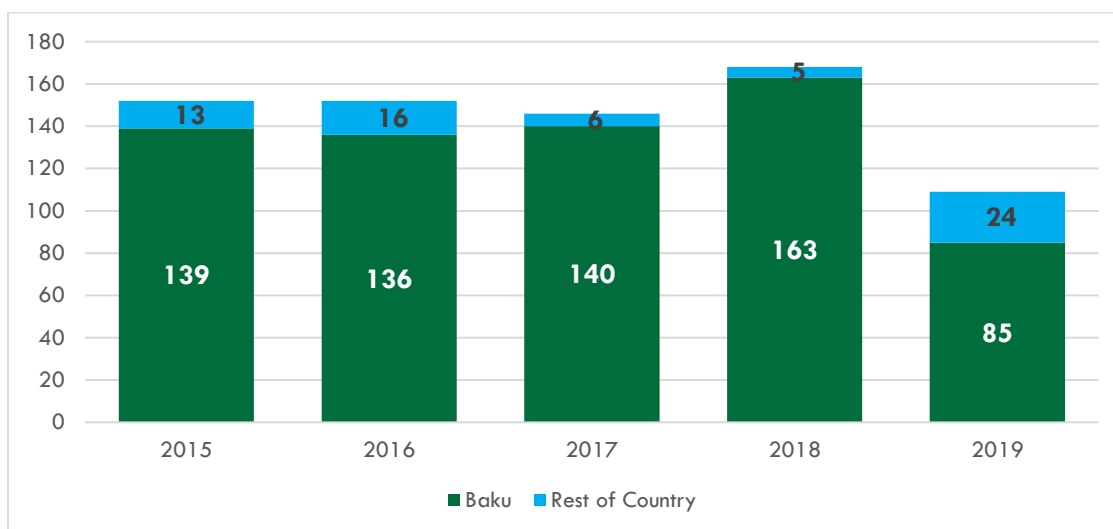 region more generally highlighted issues with pre-1990 MFB but data was not available to judge these types of housing conditions. As mentioned earlier, it was also not possible to assess any issues related to the quality of utility service provision or any other neighborhood-level amenity that might significantly affect the desirability and adequacy of a housing unit.

Housing Deficit

The housing deficit, or households in need of housing, is driven mainly by households living in overcrowded or poor quality housing rather than by new household formation. Between 2010 and 2018, Azerbaijan added roughly 181,000 new housing units, as demonstrated in Figure 9.[13] The increase nearly meets the estimated 200,000 new households added over the period.[14] The result is a national shortfall of just 18,000 units of which a majority was in Baku. The deficit grows considerably when overcrowded units are included. Assuming that 26 percent of the population lives in overcrowded conditions, which is equal to the share of population living with less than 10 square meters per person referenced in Figure 6, adds 550,000 units to the national deficit. These units may not all need to be replaced, but they exemplify the need to better account for inadequate, unlivable, or unsafe units. This gap in our understanding of housing issues indicates Azerbaijan needs to continue to track and better understand housing conditions issues in the existing stock.

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[12] It is not clear what share of the construction market obtains permits or is accounted for in this data.

[13] The State Statistics Committee provides data on the distribution of floor space of housing fund on an annual basis. The information from this table was used to estimate the total change in floor space between 2009 and 2019 which was then converted to units using the State Statistics Committee's data on the average size of dwellings. https://www.azstat.org/portal/tblInfo/TblInfoList.do?vw_cd=MT_ATITLE

[14] Since household formation data was not available the team estimated that with a population increase of 900,000 people and an average national household size of 4.5 (compared to the earlier referenced urban household size of 4.2 people) then approximately 200,000 new households were added.

Figure 9: Cumulative Estimated Housing Deficit in 2018

	National	Baku	Ganja	Sumgait	Yevlakh
New Household Formation (2010-2018)	200,100	48,000	3,800	6,400	1,900
Overcrowded Housing (2018)	530,600				
New Supply of Housing (2010-2018)	181,500	30,400	2,300	2,400	1,500
Current Deficit	**(549,200)**	**(17,600)**	**(1,500)**	**(4,000)**	**(400)**

Source: World Bank calculations based on State Statistics Committee data

The deficits in the large cities are more difficult to estimate although also show small gaps due to new household formation. To estimate the deficit within the large cities, the total square footage of new housing stock needs to be converted to the number of units. Using the national average of 103 square meters per housing unit over the period there are estimated deficits in the large cities. In Baku, this led to an estimated shortfall of 17,600 units. There was insufficient data at the city level to estimate the share of overcrowded units or other indicators of household housing conditions limiting analysis of housing issues at the subnational level.

It is also critical to underscore that it was not possible to account for the number of vacant units at the national or city level. Anecdotal information and newspaper articles indicate that many of the new units delivered in Baku were purchased as investment properties that remain vacant. Given the market price of these units and the income distribution of the city's residents, it is likely that very few of these units are occupied by local residents. It was not possible during the period of analysis to obtain data that would help to estimate the number of vacant units in Baku or elsewhere. One feasible estimation methodology would assess how many electric connections are inactive using state-run electric utility data. Every formal housing unit in Azerbaijan has an electricity connection therefore it would be clear how many units are not currently occupied.

Although the national overcrowding statistics provide some insight into housing conditions, a more complete analysis would require information on substandard and deteriorated housing that is not currently available. As mentioned earlier, the age of construction is often used as a rough indicator of physically obsolete housing. A common approach is to consider any housing older than 80 years to be obsolete. Current data on the age distribution of the housing stock is not available although a report by the UNECE from 2006 estimated the age distribution using data from the 2001 household budget survey.[15] This estimate provides some insight into the increasing prevalence of obsolete buildings. Assuming no units have been replaced since 2006 while an additional 350,000 units (or 21 percent) have been added, then an estimated 10 percent of the stock would currently be considered to be obsolete. But the data also shows that about 61 percent of housing in MFBs was built in the 1960s and 1970s. Many of these older MFBs have been poorly maintained. This stock of housing is likely in need of significant repairs to ensure that the housing does not become beyond repair and in need of demolition.

Economic Drivers & Affordability

Azerbaijan experienced a dramatic drop in poverty rates over the last twenty years along with economic progress and growth. Economic growth averaged 13 percent per year from 2002 to 2013 as Azerbaijan transitioned to middle-income status. Despite the overall positive growth, economic growth contracted between 2015 and 2017 as the country suffered through two currency devaluations. Figure 10 shows the

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[15] UNECE (2010) Country Profiles on the Housing Sector - Azerbaijan. Figure 9. Retrieved from: https://unece.org/DAM/hlm/documents/Publications/cp.azerbaijan.e.pdf

trend as the national poverty rate dropped from 29.3 percent in 2005 to 5.1 percent in 2018 based on data from the National Household Budget Survey. The impact of the oil price shock in 2015 likely increased poverty slightly-reducing some of the gains since the Government of Azerbaijan was forced to reduce social assistance benefits over this period. Many households are still clustered around the poverty line and are vulnerable to shocks that may force the poverty rate up further. This poverty distribution implies that the impacts of COVID-19 could be particularly acute for low-income households. The implication for housing is that despite declining poverty there are still many households who do not have the purchasing power to own and maintain a home.

Figure 10: National Poverty Rate, 2005 - 2018
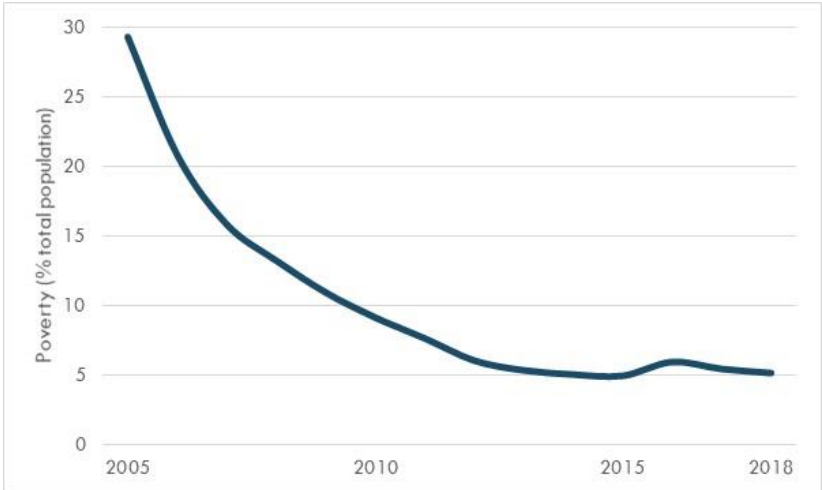
Source: State Statistics Committee in Azerbaijan

Housing affordability is determined by household income, which has risen as poverty has dropped. In 2018, the most recent year for which data were available, about 30 percent of households were considered low-income and can afford a house of 37,000 manats or less, as shown in Figure 11. It is assumed that households can afford to purchase a house at three times their annual income.[16] Meanwhile, middle-income households now account for approximately 42 percent of the population and can afford a house up to 57,000 manats.

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[16] Household annual income was estimated for each income bracket by multiplying by the average number of people per household (4.21) in urban areas. Annual household income was then multiplied by three to approximate household purchase capacity.

Figure 11: National Urban Household Purchase Capacity, 2018
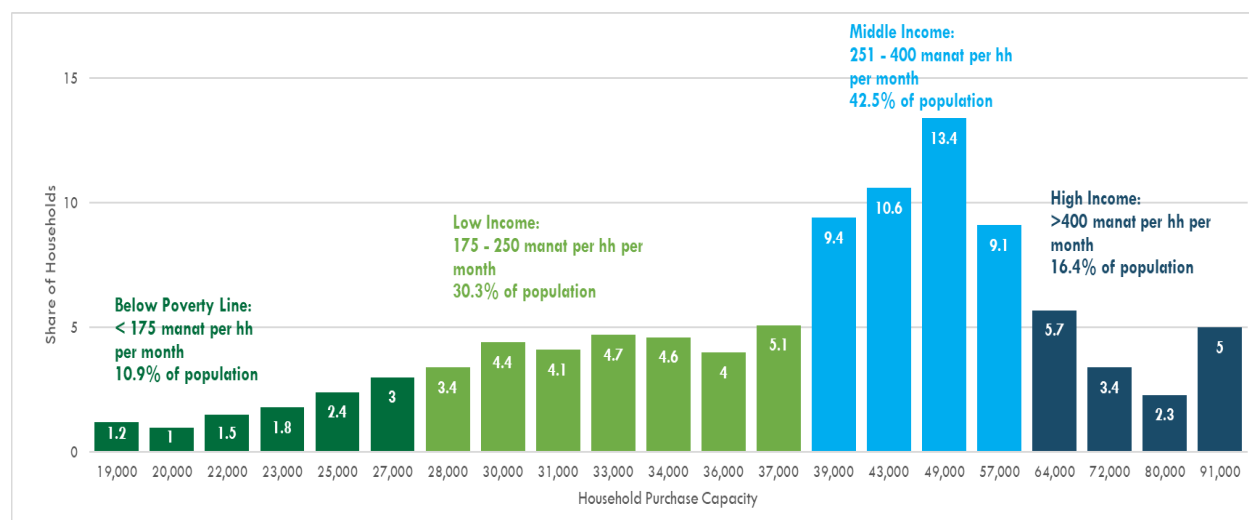
Source: World Bank calculations based on State Statistical Committee in Azerbaijan data

Using recent housing market indicators in the largest cities, the purchasing capacity translates into an affordability issue in both Baku and Sumgait. Figure 12 shows the distribution of households by their purchase capacity which is assumed to be three times the household's annual income. In other words, if the price-to-income ratio exceeds 3.0 the house is considered unaffordable. In this example, the distribution of household purchase capacity in each of the large cities is compared to the reported market price for a modest 50 square meter renovated existing housing unit.[17] The analysis suggests that just 9 percent of households in Baku could afford to buy a 50-meter housing unit at the average market price. This contrasts with Ganja and Yevlakh where 82 percent and 97 percent of households respectively could afford to purchase a 50 square meter housing unit. Sumgait is between these two extremes with about 33 percent of households able to purchase a market-rate unit. This suggests that in both Baku and Sumgait purchasing a house is unaffordable to a large share of households.

MIDA's affordable housing program offers units at below-market rates for sale to eligible households[18] but is still unaffordable to the majority of Baku residents. Figure 12 shows that a 2 bedroom unit at the Yasamal project is affordable to only the top 20 percent of households. The one-bedroom unit is affordable to 75 percent of households but is not large enough for the average 3-4 person household. The implication is that the main low-income housing program in Azerbaijan does not support the intended low-income beneficiaries.

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[17] MIDA provided data on market prices of housing for January – September 2019 for the primary housing market and secondary housing market. This analysis utilized the secondary housing market estimates in calculating affordability.
[18] Eligibility is not defined based on household incomes. The eligible households include criteria such as former/current civil servants, a person with PhD, and a forced migrant or equivalent.

Figure 12: Housing Affordability in Large Cities, 2019
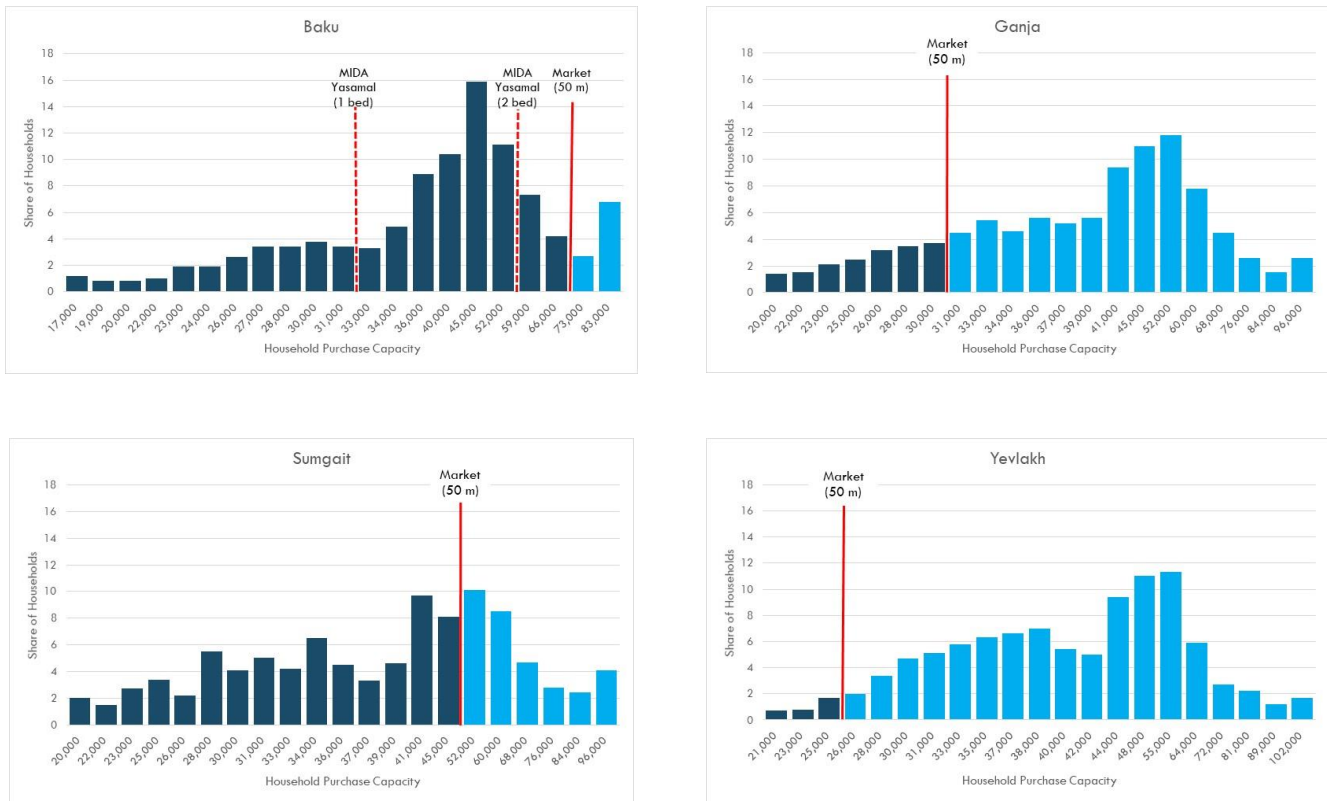
Source: calculations based on data from the State Statistics Committee of Azerbaijan

Current access to housing financing is unlikely to impact demand or affordability. Figure 13 shows that the number of outstanding mortgages increased from slightly more than 15,000 in 2014 to 27,000 in 2019 or by about 76 percent. Despite the steady increase in outstanding mortgages, relatively few households have access to housing finance. In other words, just over 1.2 percent of households in Azerbaijan have a mortgage. This shows that the mortgage industry is still nascent in Azerbaijan and is unlikely to have a major effect on housing demand. Limited access to financing likely represses housing demand and may lead to more households waiting to purchase a home thus limiting new household formation. There is demand and potential to expand access to mortgages and this would be an area to focus on going forward given the generally good economic growth yet the very low level of mortgages.

Figure 13: Housing Mortgages, 2014 - 2019
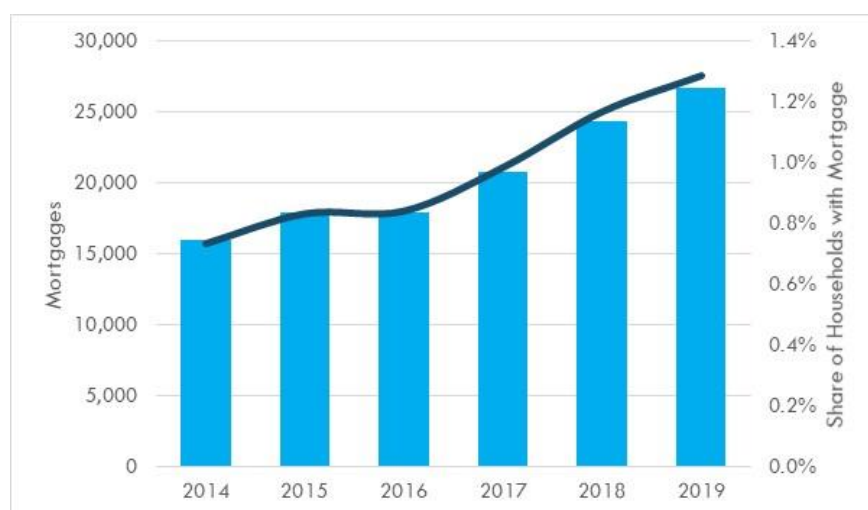
Source: Mortgage and Credit Guarantee Fund of the Republic of Azerbaijan

The MIDA affordable housing program supports both construction of units and mortgages for buyers of the units. MIDA has built more than 7,000 housing units, of which 6,000 were in Baku, since 2016.[19] The construction in Baku alone would meet approximately ten percent of the new estimated housing demand since 2010. The most recent project was delivered in September 2020, and despite the constraints imposed by COVID-19, 89 percent of the units sold out in just four days.[20] The implication is that the product being delivered by MIDA is attractive to many households, yet it is not clear that the units are affordable to a majority of households (see Figure 16 for more detail). MIDA offers households access to mortgages from the Mortgage and Credit Guarantee Fund. The Mortgage fund also supports rent-to-own programs with down payments set at 12 months of rent.

Strong economic indicators drove housing demand in Azerbaijan over the last decade. Economic and employment expansion, particularly in the largest cities, drove housing demand and construction. The delivery of many high-income apartment blocks partially reflects this growth as well as increased interest in purchasing investment units by upper-income households. Anecdotal information indicates that many households used the housing sector as an important investment vehicle over this period by purchasing investment properties, particularly in Baku. The use of housing as an investment vehicle likely increased demand and may have created an oversupply of high-income housing units that are contributing to current affordability issues.

3. Limitations of Existing Data

Despite the effects of the global recession and falling oil prices, the fundamental economic and demographic conditions in Azerbaijan improved over the last decade. Declining poverty and unemployment rates increased the demand for housing. With improving incomes, households were able to improve their housing situations. Furthermore, a growing population, particularly in the large cities, increased demand for new housing. Demographic and economic dynamics supported expansion in the housing sector and construction of new formal housing nearly kept pace with new household demand.

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[19] https://mida.gov.az/en/projects/progress/
[20] http://abc.az/en/news/56194

Limited information about housing conditions and clear indications of affordability issues in Baku suggest that additional data is required to fully assess the housing demand and deficits in Azerbaijan. The analysis of existing data provided a great deal of insight into housing in Azerbaijan but there are still gaps that make it difficult to suggest the exact size of the deficit and perhaps more importantly what type of housing units are needed. The gaps include the following (See Appendix 2 for a more detailed list of missing data):

- **Number of units added each year by the housing market**: This analysis used national estimates of the delivery of new housing units but a more detailed accounting of the delivery pipeline at the city-level would improve the precision of estimating deficits. In addition, a more accurate accounting of both formal and informal housing production would also improve estimates.
- **Number of units that are in poor condition**: There is no assessment of the standard existing housing stock in Azerbaijan. In the absence of detailed data, many countries use the age of the structure as a proxy for estimating whether a building is physically obsolete. This would provide some insight but given the pervasive backlog in building maintenance, age is likely an insufficient measure because it doesn't give a sense of the effective age of a building.
- **Household perceptions of housing quality and conditions**: Household surveys can provide insight into housing quality and conditions without doing a technical or investment assessment of housing units.
- **Number of households cohabitating**: Available data did not show how many households are cohabitating. Many households chose to live in a multi-generational household but others are forced into cohabitating. Including a census or household survey question about whether or not households are cohabitating by choice would provide insight into unmet housing demand.
- **Number of rooms in housing units**: There are many approaches to estimating overcrowding but the most common approach is to assess how many people there are per room. There is no information available in Azerbaijan about the number of people per room.
- **Number of vacant units**: To fully understand the dynamics between household formation and housing supply it is useful to track the number of vacant units in each housing market. Azerbaijan lacks information about housing vacancies.
- **Population or job projections**: Without projections, it is impossible to forecast demand and adequately plan for where housing units will be in high demand.

4. Overcoming Gaps in the Existing Data Collection Framework

Housing Market Assessment Methodology

To fill the information gap, the World Bank team designed and piloted a mixed-methods housing market assessment tool in two districts of Baku city. Given the difficulty of collecting comprehensive and timely data about the housing sector, particularly housing conditions, the team aimed to develop a rapid assessment tool. The tool could be scaled up to provide information that could help structure programmatic support for the sector and guide government, and even private sector, decision making. The tool assesses the sector using three methods: a set of semi-structured interviews with local stakeholders, a visual assessment of building conditions, and a household survey. Each method is designed to stand alone but can also be interpreted in conjunction with the other parts. The aim is to offer highly adaptable tools that the Government of Azerbaijan could use to monitor the housing sector based on their needs. To test the usefulness of these tools, the team, with support from the Government of Azerbaijan, conducted pilots in two areas: the Nasimi District and the Khatai District with a local partner (Synergetics) from April to November 2020. The two districts were chosen for the pilot because they contain many pre-1990 MFBs that might need redevelopment or renovation.

Semi-structured interviews provide insight into major issues, trends, and overall consumer preferences. The tool includes semi-structured interview guidelines for local residential stakeholders including brokers, appraisers, contractors, developers, local government officials, and community leaders. In some countries, these interviews are conducted on an annual or semi-annual basis to serve as an indicator of market demand and gauge emerging issues. In the pilot, the team interviewed three people from each of the stakeholder groups in Nasimi and Khatai (See Appendix 3 for more detail).

A visual assessment of building conditions provides insight into capital improvement needs and general housing stock conditions. Visual assessments are widely used by investors to gauge not just value but also capital improvement plans and building management approaches. The assessment provides critical insight into the overall housing conditions, particularly for pre-1990 MFBs. While the method used here doesn't include a detailed engineering review that would assess seismic issues, it does give insight into some of the most general and obvious issues that make buildings vulnerable. As a result, this type of assessment is increasingly used to help public or private stakeholders determine whether to demolish or upgrade an existing building. Figure 14 summarizes the 129 buildings in Nasimi and Khatai assessed. The enumerators were trained architects that sampled buildings from each of the previously established building typologies as shown in the following table. The rationale was to provide insight into conditions across the housing sector, rather than just in pre-1990 MFBs. While each building in the city will have different conditions based on the level of investment and daily maintenance, assessments can be used to give general insights into the condition of buildings in a submarket. (See Appendix 4 for more detail).

Figure 14: Housing Typologies and Visual Building Assessment Sample

Housing Typology	Description		Observations	
			Khatai	Nasimi
Informal on protected land	Mostly single-family informal housing adjacent to exposed oil-wells temporary dirt roads and irregular plot sizes		10	NA
Inner-city squatter	High-density housing, no visible roads, varying roof types, temporary materials, and encroached courtyards		10	10
New multi-story	More than 9 stories, on-street parking		10	12
Pre-1990 multi-story	2 - 9 stories, soviet style prefab housing, parking lot within the courtyard		10	13

Organic cluster	A mix of unplanned narrow roads and pedestrian pathways with informal plot sub-divisions, houses close together with limited ventilation, unauthorized additions		10	11
Planned plotted	Mostly single-family housing, uniform size plots, good landscaping		12	10
Temporary	Single- and multi-story buildings with dilapidated facades surrounded by improved areas		11	NA

Source: Photos from 2020 fieldwork by Synergetics & typologies defined by World Bank 2015

A household survey provides insight into household perceptions and conditions of individual units. Household surveys can provide insight into housing conditions, such as overcrowding, that allow a more detailed calculation of housing deficits. Similar to the building visual assessment, the household survey cannot account for all the different conditions within individual households and the variety of household investment decisions, but it does give insight into general perceptions and housing conditions issues.

Although Nasimi and Khatai both have many pre-1990 MFBs and informal housing their growth has been different since the end of the Soviet era. Khatai is much larger with a lower population density than Nasimi. As demonstrated in Figure 15, since 2009 Khatai's population has increased rapidly whereas Nasimi has had more modest population growth.[21] The population growth may be the result of strong job growth in both districts. Since 2009, Nasimi has been significantly redeveloped due to public infrastructure investment and privately developed MFBs[22]. Khatai has had less redevelopment and therefore likely maintains a larger share of its older housing stock than Nasimi.

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[21] Khatai also accounted for unregistered residents but this data was not available in Nasimi so the population growth might be underestimated.

[22] Note that we distinguish between pre-1990 MFB and post-1990 MFB because of major changes in the construction and delivery of housing units. Past analysis has found that a majority of the post-1990 stock is in relatively good condition with more professional property management and tighter adherence to building codes.

Figure 15: Basic Characteristics of Khatai and Nasimi Districts

	Nasimi	Khatai
Basic Statistics		
Population (2009)	208,132	244,841
Population Registered (current)	217,000	318,000
Population Unregistered (current)		380,000
New Jobs (2017)	6,934	9,108
Area	10 sq km	31 sq km
Density (current, people per sq km)	21,700	10,258

Source: World Bank semi-structured interviews conducted by Synergetics

Pilot Study Outcomes

The following reviews the outcomes for each part of the rapid market assessment and then provides a synthesis of the findings. Overall, the semi-structured interviews reveal a difference between the two neighborhoods with increasing demand for small units. The visual assessment confirms that there are few buildings in current need of demolition but that there are many buildings on the verge of becoming unlivable without more support to maintain the structural integrity and safety of the buildings. Additionally, the household survey reveals that many households are satisfied with their housing units but that there are many issues with the overall building conditions as well as with the quality of services provided. Taken together the assessment suggests that in both districts, but particularly in Khatai, there is a small window of opportunity to renovate housing units and buildings to avoid a future scenario where many residential buildings become unfit for habitation.

The impact of COVID 19 on the housing sector in Azerbaijan is still emerging but it is adding uncertainty and increasing financial stress. The pandemic interrupted field assessments for this project but also enabled the inclusion of several questions about the impact on households to date. Figure 16 shows that about a third of the sample reported no impact, but 42 percent reported being unable to pay their rent or mortgage, 29 percent had experienced unemployment and 16 percent had experienced severe financial distress. The impact seems to differ across the study areas with Khatai households struggling to make payments and find work more than those in the two Nasimi neighborhoods. It seems clear that COVID-19 is increasing the vulnerability of some households and could have long-term effects on housing demand and the ability of households to maintain their housing conditions.

Figure 16: Household Reports on the impact of COVID-19

COVID 19	Nasimi		Khatai	Total
	MD 3	MD 4	Ahamdli	Total
No impact	26%	38%	31%	32%
Unable to pay rent or mortgage	43%	32%	59%	42%
Experienced unemployment	21%	23%	44%	29%
Experienced financial distress	11%	23%	12%	16%

Source: World Bank household survey 2020 conducted by Synergetics

Semi-structured Stakeholder Interviews

The semi-structured interviews were piloted in March and April 2020 before the onset of the COVID-19 pandemic and although much of the market information is likely out of date, yet analysis still reveals some important issues. Real estate brokers commented that Nasimi is more expensive than Khatai. Demand for unit types differed according to brokers. Developers and brokers agreed that Nasimi had very few

vacant sites for redevelopment while Khatai still had some room for ground-up development without demolition. All stakeholders agreed that very few buildings are in such a state of disrepair that they need to be demolished, although stakeholders also suggested that many older, particularly pre-1990, MFBs have significantly deteriorated.

In both districts, ZhEK[23]s are struggling to keep up with the demand for building maintenance for Soviet-era MFB stock. The main explanation was that ZhEKs are currently in a difficult financial situation in Baku and are not able to provide the necessary maintenance and property management services. Part of the issue is that the buildings that are served by ZhEKs need significant capital investments since they were built during the Soviet area. Yet, the main incomes for ZhEKs come only from cleaning buildings and removing garbage. This is not sufficient to adequately maintain MFBs.

Recent registration efforts are reducing the number of unregistered buildings in both districts with no perception of poorer quality due to lack of registration. All stakeholders indicated that lack of registration did not imply poorer quality buildings but rather the timing of construction. There was consensus that unregistered buildings had lower market values due more to tenure risks than perceptions of poor quality. Furthermore, stakeholders implied that MFBs built in the 1970s and 1980s were not obsolete but rather needed upgrades.

Figure 17: Comparison of Findings from Stakeholders in Khatai and Nasimi Districts

	Name	Khatai
Land Use Dynamics	Significant Redevelopment	Limited Redevelopment
House Price Dynamics	Average	Expensive
Development Potential	No vacant sites	Infill redevelopment
Income	Middle Income	Middle Income
Type of Unit Demanded	New Small Affordable	Older Buildings
Buildings in Disrepair		820 Buildings
Obsolete Buildings		99 Buildings
Disaster Risk	Seismic	Landslide and Seismic
Quality Issues with Unregistered Buildings	No	No

Source: World Bank semi-structured interviews conducted by Synergetics

In the Khatai district, stakeholder interviews revealed population and prices increased over the last twenty years but residential units in need of repair still remain. The stakeholders reported that the newer buildings did not have issues. In general, there was consensus that the majority of pre-1990 MFBs that were constructed between 1975 and 1980 are not obsolete. Nonetheless, there was also a consensus that many of these buildings have an unmet need for upgrades or maintenance. Several stakeholders reported that residents enclosed balconies without making structural upgrades and this issue needs to be addressed. In Khatai, the local government representative reported that 820 buildings were in disrepair and 99 buildings were in critical condition. In the older buildings, the HOAs reported having difficulties in covering the building maintenance costs underscoring the need to provide more support for repairing buildings in Khatai. The stakeholders reported awareness of potential seismic and landslide risks in the district, but that these risks have been mitigated during the construction process and through recent upgrades to neighborhood infrastructure. Nonetheless, some stakeholders pointed to some older buildings that might have been inadequately retrofitted.

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[23] ZhEKs refer to local authority-owned housing management offices.

In the Nasimi district, stakeholders reported declining pricing and high demand for new smaller units. Several stakeholders, including government representatives, said many of the buildings were more than 100 years old and in very poor physical condition with potential seismic risks and were sold to investors for redevelopment. They suggested that this had improved quality but that major deferred maintenance remains an issue in many buildings. There is no flooding or landslide risk in this district. There are no vacant units in the district but potentially obsolete five-story residential buildings could be redeveloped. In general, it is difficult to make large renovations or repairs to pre-1990 MFBs because households are only willing to make small investments. Furthermore, large housing units are not in high demand in Nasimi and can be difficult to sell. According to brokers, households are looking for smaller more affordable units with two bedrooms.

Interviews with developers and contractors suggested that both seismic and landslide risks may be better understood than previously suggested. According to contractors in both districts, the construction process mitigates seismic and landslide risks since building codes are enforced and require reinforcing buildings. In Khatai, retaining walls were added to mitigate the risks of landslides for the riskiest area between General Shikhkinshi and Ganja Streets. Nonetheless, the interviews did suggest that in older buildings where households converted balconies into living space there are unknown seismic risks. In Nasimi the local government representative said they mitigated the seismic risk by evacuating and redeveloping buildings that were older than 100 years.

Finally, the semi-structured interviews revealed large differences in the types of information collected by local government. On the one hand, the collection of detailed data in Khatai reveals untapped data collection capacity that could be leveraged to better track housing market dynamics in other districts. On the other hand, the difference between the two districts shows that there is a clear need for standardization and data collection support from higher levels of government. The collection of building-level information in the "building account book" remains ambiguous in terms of reliability. During the interview, respondents mentioned that it is better to contact the Baku Mayor's Office which would have information about buildings in need of renovation or demolition but in meetings with the Mayor's office, the Statistics Committee, and SCUPA they indicated that the information would be with the district level executive branch. This ambiguity indicates a need to clarify responsibility and monitor data collection.

Residential Building Visual Assessment

The visual assessment, which took place from September – October 2020, confirmed key perceptions of the semi-structured interviews about the demand for demolition and renovation in the two districts. Less than ten percent of buildings assessed were so severely degraded that they appeared to warrant demolition from a visual non-structural assessment carried out by architects. Figure 18 shows that the severally deteriorated buildings were spread across both districts indicating that size, location, or age is not a sufficient designation to determine the condition of housing in these two districts. This implies improving the condition of buildings will require a more nuanced designation. The initial pilot points towards a clear demand for improvements, maintenance, and modernization. Nonetheless, there are some clear trends by building typology.

Figure 18: Map of Assessment of Structural Integrity
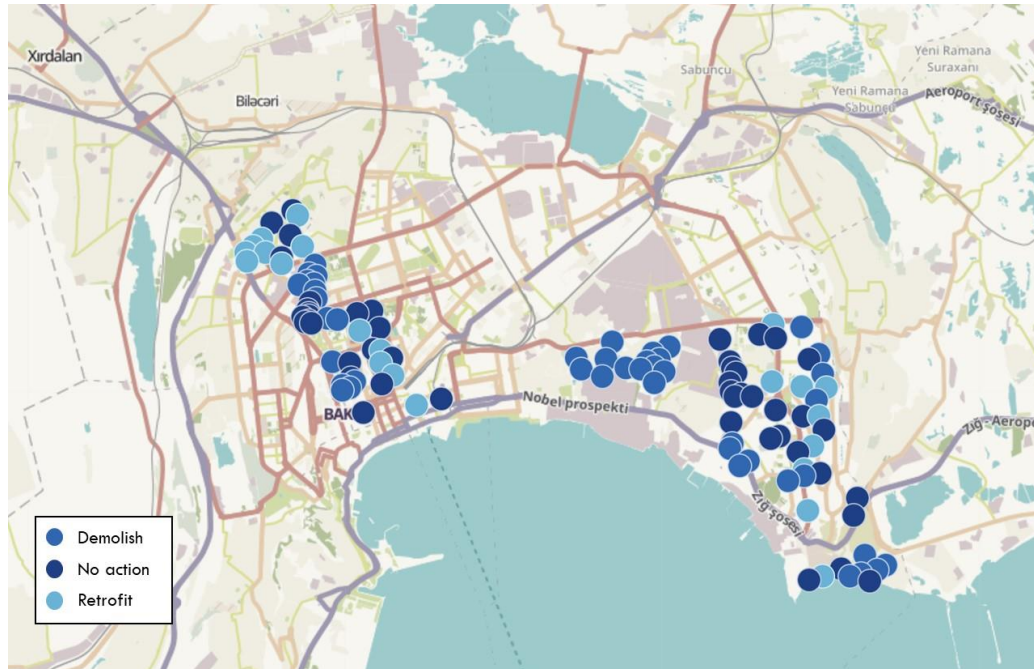
Source: World Bank Visual Assessment and Open Street Maps

Building overhangs are a potential seismic issue for a large share of older buildings, MFBs, and single-family homes. Without a detailed engineering inspection, it is impossible to fully assess a building's seismic risk yet it is possible to establish some major telltale signs of issues. Whether a building is detached or shares a load-bearing wall doesn't necessarily indicate seismic risk but it does indicate the types of seismic issues that might be present. Figure 19 reveals that many more of the buildings built since 1990 are detached in Nasimi compared to Khatai. Nonetheless, there are several visual indicators of potential seismic risk. One commonly used indicator is a soft story where a multi-story building has a large opening on the ground floor, such as a parking garage or retail spaces with large windows. A building is classified as having a soft story when the ground floor is 70 percent as stiff as the floor above it or 80 percent as stiff as the average three floors above it. Another indicator is the presence of heavy overhangs where there is an unbraced unreinforced masonry parapet or canopy that appears inadequately supported. Finally, the presence of heavy exterior cladding that has the potential to fall in the event of an earthquake, especially if the load-bearing connections do not accommodate movement, might need to be remediated. It is impossible to assess the type of connection from a visual assessment but the presence of new heavy cladding may indicate the need to conduct further investigations. Figure 19 shows very limited soft stories in buildings built before 1990. Soft stories tended to be in more recent construction that was likely subject to more stringent building code enforcement. In contrast, as shown in Figure 20 large and heavy overhangs were largely in older buildings, and often the result of household structural changes, and these warrant additional investigation and more detailed analysis. Heavy overhangs were overwhelmingly present in old multi-story and temporary housing.

Figure 19: Non-structural Evidence of Seismic Issues

	Detached		Soft Story		Overhangs		New cladding	
	Khatai	Nasimi	Khatai	Nasimi	Khatai	Nasimi	Khatai	Nasimi
1950 - 1990	41%	38%	0%	0%	39%	41%	0%	9%
1991 - 2010	42%	86%	23%	50%			0%	14%
Total	**42%**	**57%**	**10%**	**20%**	**25%**	**25%**	**0%**	**11%**

Source: World Bank Visual Assessment

Figure 20: Heavy Overhangs by Building Typology

Housing Typology	Heavy Overhang
Informal on protected land	0%
Inner-city squatter	15%
New multi-story	0%
Old multi-story	74%
Organic cluster	10%
Planned plotted	0%
Temporary	91%
Grand Total	**25%**

Source: World Bank Visual Assessment

The condition of informal single-family houses was worse than formal houses implying demand for both relocation and retrofitting. The visual assessment included an evaluation of building conditions of single-family houses. Buildings that were well maintained with good trunk infrastructure were categorized as in good condition. Buildings that showed signs of deferred maintenance without major structural were classified as moderate. Finally, buildings that showed obvious signs of deterioration to the major structural elements and often limited trunk infrastructure were considered in poor condition. Figure 21 shows that all of the planned and plotted houses were considered in good condition. In contrast, all of the inner city squatter and temporary houses were in poor condition.[24] Houses on protected land were more mixed with 15 percent in good condition, 5 percent in moderate, and 80 percent in poor condition. Nonetheless, all of the houses surveyed were very close to oil pipelines and contaminated land implying that relocation was likely the best solution for these households. Finally, organic cluster housing was the most mixed with 5 percent in good condition, 24 percent in moderate condition, and 71 percent in poor condition. This mix implies that households may need some support with renovation, better trunk infrastructure, and neighborhood improvements. The implication is that there needs to be a differentiated approach to supporting formalization and upgrading of units in informal areas.

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[24] Note that the team evaluated both single-family and multifamily temporary houses but the majority were single-family and all were in a very degraded situation.

Figure 21: Single-family Building Typology Condition
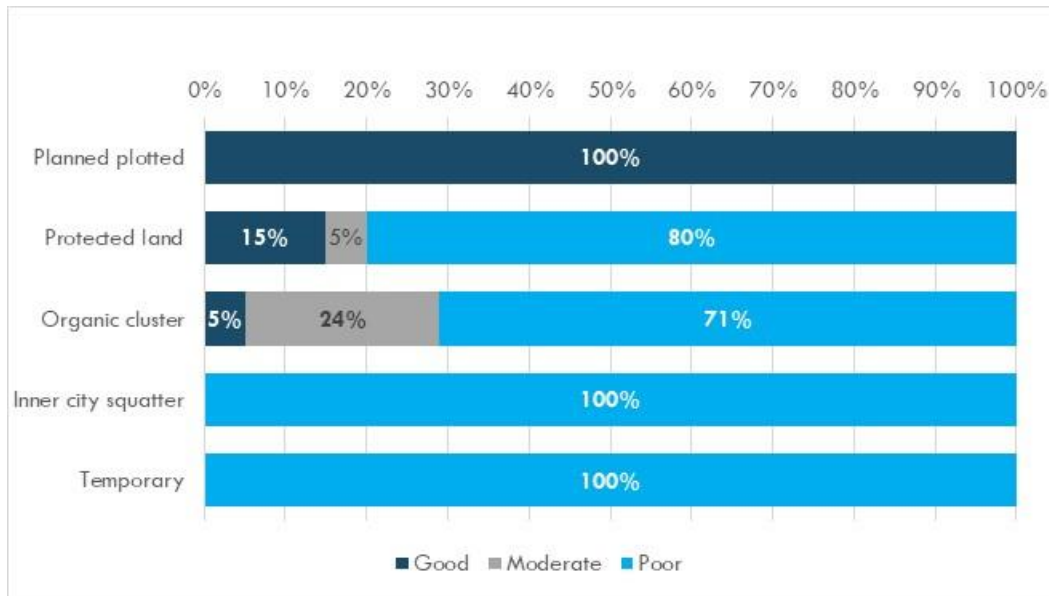
Source: World Bank Visual Assessment

The pilot found that 95 percent of pre-1990 multi-family apartment buildings showed signs of deterioration implying widespread demand for retrofitting. During the visual assessment, the façade of each building was assessed for evidence of structural issues as well as major and minor deterioration. Facade deterioration can lead to water intrusion, mold infestation, and eventually structural damage. In other words, facade deterioration is a potential source of unsafe living conditions inside a building. Figure 22 shows that only 9 percent of post-1990 multi-family apartment buildings showed façade issues of which none were considered major.[25] In contrast, 65 percent of pre-1990 multifamily apartment buildings had minor issues and 30 percent showed major issues. This implies that post-1990 buildings are not in need of retrofitting support but that many of the pre-1990 buildings require significant support.

Figure 22: Facade Issues and Poor Building Condition by Housing Typology

Façade Issues			
Housing Typology	Minor	Major	Total
Post-1990 multifamily	9%	0%	9%
Pre-1990 multifamily	65%	30%	95%

Source: World Bank Visual Assessment

Interior assessments also revealed maintenance issues and potentially larger structural issues in a high share of pre-1990 MFBs. As shown in Figure 23, the survey team identified poor condition hallways and broken windows in the interior common areas of a majority of the pre-1990 MFBs. There were fewer exposed wires, yet 55 percent of pre-1990 MFBs in Nasimi had exposed wires. These three indicators suggest that there are severe deferred maintenance issues in many of the buildings that require rehabilitation. The evidence of structural issues was more mixed with the largest share of buildings showing water discoloration as an indicator of demand for window replacement. It was a good sign that only 20% of building in Khatai and 36 percent of buildings in Nasimi showed signs of major water damage or mold. Fewer buildings had evidence of roof leaks but again there is likely strong demand for roof repairs and

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[25] Minor façade issues include peeling paint, a few cracks in the façade, doors/entryways in clear disrepair, deterioration around the windows, etc. Major façade issues include major cracks in the façade, major modifications to the exterior, missing or broken windows, etc.

replacement. These conditions imply that many pre-1990 MFBs need interior renovations and may not be safe. The condition of common areas and degradation of windows also indicates a high potential to improve overall building efficiency.

Figure 23: Interior Issues by District

Interior Issues		
Type	**Khatai**	**Nasimi**
Maintenance Issues		
Poor Condition Hallways	60%	55%
Broken Windows	90%	82%
Exposed Wires	20%	55%
Structural Issues		
Mold or Water Damage	20%	36%
Window Discoloration	90%	82%
Roof Leaks	50%	36%
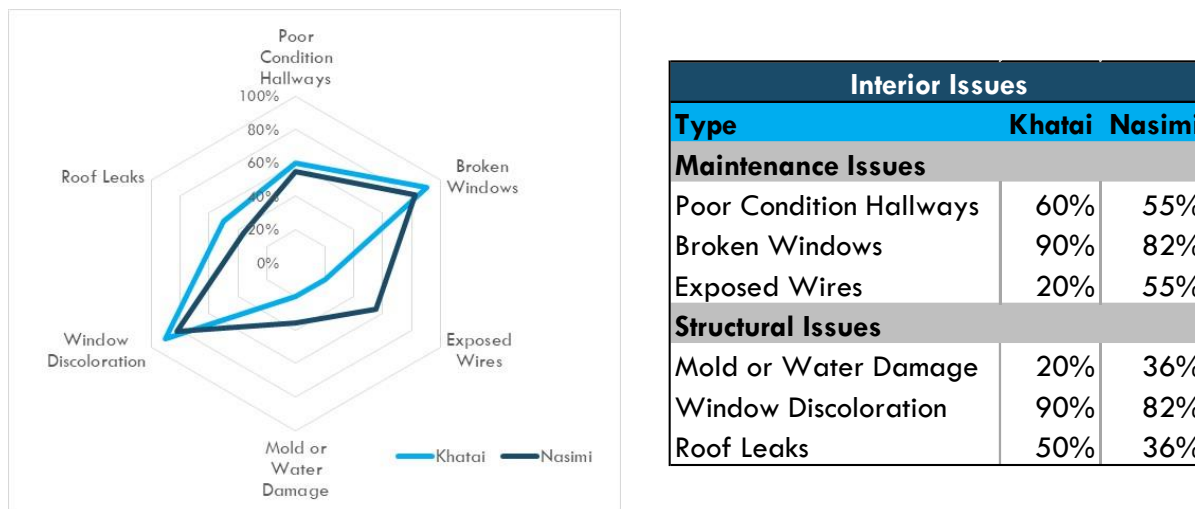
Source: World Bank Visual Assessment

The visual building assessment provides very preliminary evidence that the majority of pre-1990 MFBs and a large share of informal single-family houses require some type of renovation to avoid becoming unlivable. Given the small sample size and distribution across building typologies, it is difficult to exactly determine the number of buildings in need of major renovation and or demolition. Nonetheless, it is clear that pre-1990 MFBs require significant renovation and that informal single-family houses also need to be relocated or upgraded.

Household Survey

The pilot household survey was conducted in three neighborhoods in Nasimi and Khatai from September to October 2020. As summarized in Figure 24, the pilot included a survey of 400 households within two specific neighborhoods of Nasimi, the 3rd Micro-district (MD3) and the 4th Micro-district 4 (MD 4), as well as the Ahmadli neighborhood of Khatai. These neighborhoods were selected as representative of the conditions of the district and specifically the housing condition issues facing households in pre-1990 MFBs. Households had on average between 3 and 4 people per household, with the largest average in Ahmadli. The larger household size partially reflects the difference in housing typology where more than half the sample in Khatai was in single-family homes compared to no single-family homes in Nasimi. (See Appendix 5 for more detail).

Figure 24: Household Survey Basic Statistics

	Nasimi		Khatai	Total
	MD 3	MD 4	Ahamdli	
Obervations	133	133	134	400
Expenditures per month	598	733	515	615
Household size (ppl)	3.4	3.6	4.0	3.7
Share renters	23%	23%	13%	20%
Old Multi-Family	72%	86%	42%	67%
New Multi-Family	11%	5%	0%	6%
Temporary	0%	0%	4%	1%
Company Housing	17%	8%	4%	10%
Single Family	0%	0%	51%	17%

Source: World Bank household survey 2020 conducted by Synergetics

The household survey reinforced issues uncovered in the building assessment but also revealed unit-level issues and perceptions related to housing conditions. Overall households had lived in their housing units for 18 years on average. For 83 percent of the households, the housing unit was their only real estate in the greater Baku area. Furthermore, households largely obtained housing units through real estate agents, friends, or relatives as shown in Figure 25. Only 7 percent of households obtained their units through government housing programs, either post-Soviet privatization programs or more recent social housing programs. The implication in both districts is that there has been turnover in the housing market since privatization.

Figure 25: Means of Obtaining Housing Unit
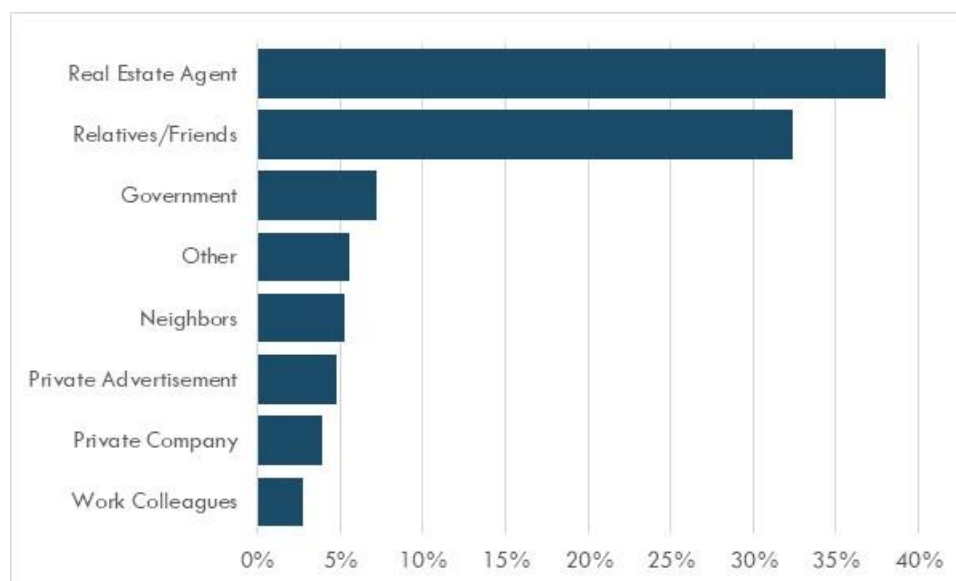
Source: World Bank household survey 2020 conducted by Synergetics

Overall, 14 percent of households were unsatisfied with their housing unit. Figure 26 demonstrates that MD3 had the highest share of unsatisfied households, 20 percent. In contrast, only 6 percent of households were unsatisfied with MD4. The difference may indicate the contrasting housing conditions in the study areas.

Figure 26: Housing Unit Satisfaction by Neighborhood

Source: World Bank household survey 2020 conducted by Synergetics

Another indication of satisfaction was that 21 percent of households indicated an interest in buying a new housing unit but most households cannot afford market prices. These households reported being able to afford an average purchase price of approximately 17,000 manat which is well below the average market price for a 50 m² house. Only 4.7 percent of households interested in buying a new unit could afford market prices as shown in Figure 27. In other words, households that are interested in purchasing a new housing unit perceive that they cannot afford currently available units. This implies a large demand for affordable housing units within the household sample.

Figure 27: Distribution of Perceived Affordable Purchase Price of House
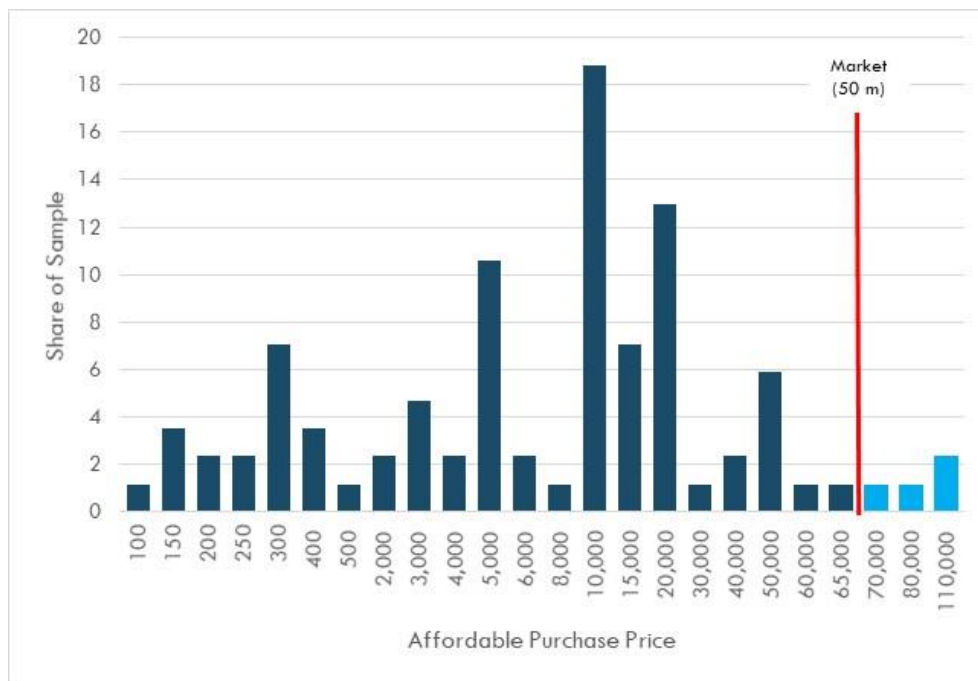
Source: World Bank household survey 2020 conducted by Synergetics

The level of satisfaction does not seem to be directly correlated with the age of buildings, given that buildings in Microdistrict 4 (MD 4) are older than Ahmadli and Microdistrict 3 (MD 3). Figure 28 shows that 64 percent of housing is more than fifty years old in MD 4 compared to seven percent in Ahmadli and 33 percent in MD 3. Furthermore, despite significant redevelopment in Baku only a small share of the housing stock in the sample is new. Nonetheless, as shown in Figure 26, the neighborhoods do not show differences in the level of overall satisfaction with housing units by households. This seems to confirm evidence from the semi-structured interviews and the visual assessment that age alone is not a good indicator of building condition in Nasimi and Khatai, and potentially Baku more generally. The following analysis will reveal that the level of property management and overall building maintenance appears to have more to do with perceptions of housing conditions.

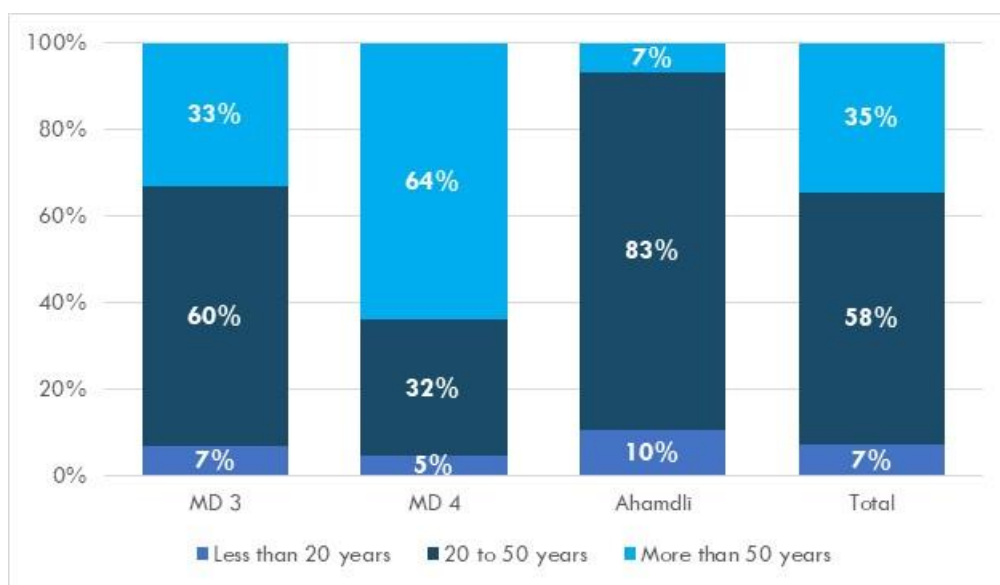*Figure 28: Age Range of Housing Stock by Neighborhood*

Source: World Bank household survey 2020 conducted by Synergetics

The evidence of overcrowding is mixed showing that many units in all three neighborhoods are small but that most households live with only one household and have a sufficient number of rooms. There are at least three different approaches to measuring overcrowded housing as summarized in Figure 29. The first is the number of households that have more than one household residing in the unit. Overall, only 3 percent of the sample had more than one household. There were more households sharing units in Ahmadli, 7 percent, than in MD 3 or 4 but this might reflect that more single-family homes were sampled in Ahmadli than in the other neighborhoods. The rate of households sharing units does not indicate an acute overcrowding issue. Another measure of overcrowding is the number of people per room which is calculated by checking if each household has enough rooms for their household size.[26] Overall 13 percent of the sample did not have enough rooms with higher rates in MD 3 and MD 4. Overcrowding is higher using this metric than sharing households but still indicates a modest issue. This is consistent with stakeholder interviews that suggested small units are demanded, particularly in Nasimi. The third measure of overcrowding shows the highest share of overcrowding but is still below national levels. Similar to the other measures, there is no global standard of how many meters per capita constitutes overcrowding, but 10 meters per person is widely used as one threshold. With this measure, 18 percent of sampled households lived in overcrowded conditions. Figure 30 shows that shifting the standard up or down would have a large impact on the rate of overcrowding but not

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[26] This analysis assumed that households with 1 or 2 members required 1 room, households with 3 or 4 members required 2 rooms, households with 5, 6, or 7 members required 3 rooms, households with 8 or 9 members required 4 rooms and households with more than 10 members required 5 rooms. This methodology is based on the UK Government's approach.

diminish the severity of the issue. Furthermore, only 15 percent of the household sample listed too little space as an issue with their unit. The analysis of overcrowding indicates that there might be demand for new larger units within these neighborhoods but more than likely households are sacrificing square footage for neighborhood location close to the city core.

Figure 29: Three Measures of Overcrowding by Neighborhood
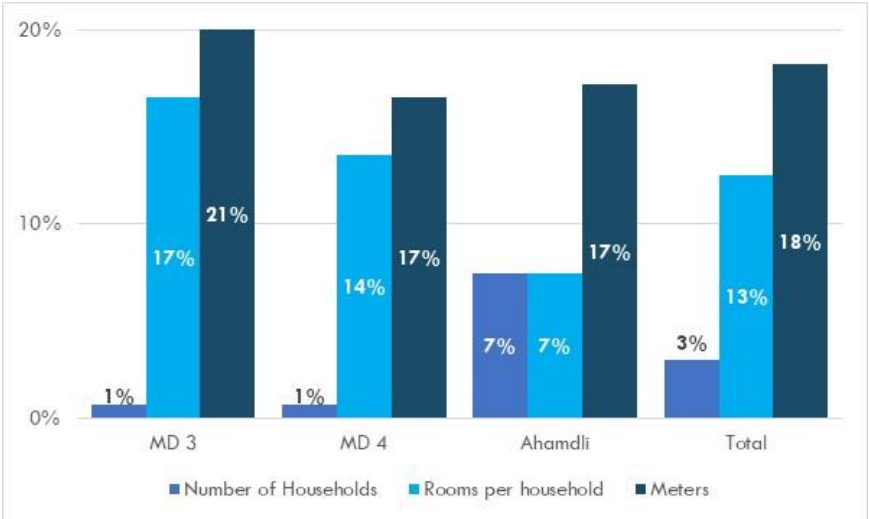
Source: World Bank household survey 2020 conducted by Synergetics

Figure 30: Distribution of Sample by Square Meters Per Person (with overcrowding point in red)
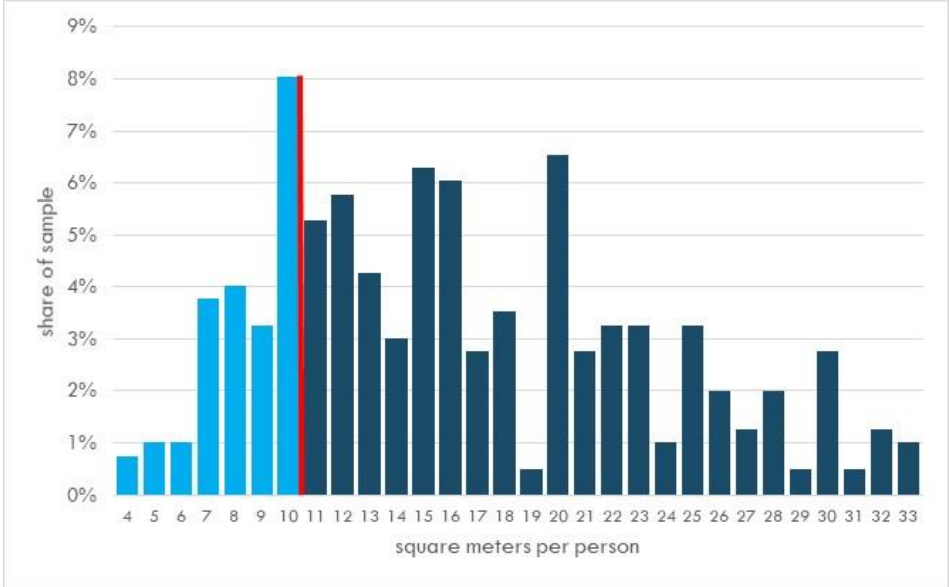
Source: World Bank household survey 2020 conducted by Synergetics

A majority of households renovated their housing units in the past and more than half have additional renovation needs. Approximately 70 percent of households made renovations on their unit at some point and 29 percent have made structural modifications. Despite these renovations, more than half the sample would like to make repairs or modifications to their unit as shown in Figure 31. The most common renovation need was repairs to walls and or ceilings, followed by plumbing and kitchen repairs.

Figure 31: Household Reported Renovation Needs By Neighborhood

Renovation Needs	Nasimi		Khatai	Total
	MD 3	MD 4	Ahamdli	
No repairs	33%	53%	39%	42%
Wall & Ceiling Repairs	41%	28%	42%	37%
Plumbing Repairs	35%	28%	20%	28%
Kitchen Repairs	5%	17%	10%	10%
Flooring Repairs	8%	5%	19%	10%
Add Rooms	7%	1%	4%	4%

Source: World Bank household survey 2020 conducted by Synergetics

Delving further into households' perceptions of housing issues reveals more issues with the building than with the individual unit, particularly the size. Households were asked to identify their top three issues with their housing unit. It should be noted that 38 percent had no problems at all. The problems households did identify were in four broad categories, with building issues mentioned the most. As demonstrated in Figure 32 the four categories included issues related to the housing unit, the building, the services, and the neighborhood. Approximately 36 percent of households mentioned issues with the building including noise, elevators, common areas, and standing water in the basement. Microdistrict 3 had the highest rate of reported issues with building conditions. Meanwhile, a smaller share of households, 26 percent, mentioned issues with the housing unit including cracked walls, utility issues, and too little space. Overall, there was little difference between the three study areas. Services were an issue for 16 percent of households with the most households mentioning issues related to sewers followed by roads and access to transportation. A quarter of households in Ahmadli reported issues with services which was higher than in the other study areas. Finally, about 14 percent of households mentioned issues with the neighborhood. Nearly 17 percent of households in Microdistrict 3 mentioned issues with crime and security in contrast to 1 percent in the other study areas.

Figure 32: Household Identified Issues
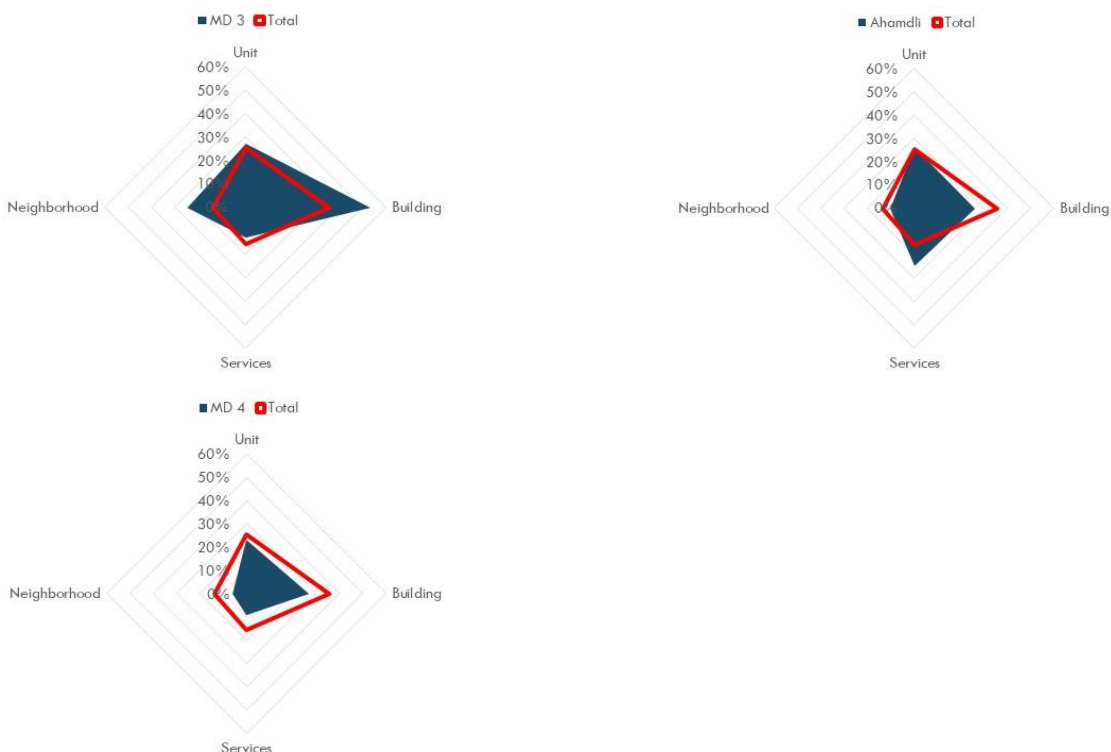
Source: World Bank household survey 2020 conducted by Synergetics

The building issues reflect that facade issues and structural deterioration are leading to flooding and sewerage backups in pre-1990 MFBs. Households, particularly in pre-1990 "French"[27] style MFBs, complain that repairs do not last more than a year. Households reflected that the government has repaired the facade of many buildings but these larger structural issues continue to grow. Residents are dissatisfied with the work of ZhEKs and the municipality. Many residents of pre-1990 MFBs complained about the quality and functioning of elevators, drainage pipes, electrical lines, and water. Given that these are private entities, the government has limited scope or means of intervening in the past.

Despite the identification of issues in the common areas and structural integrity of buildings, sampled households were largely uninterested in paying for building improvements or taking a loan to improve their unit. Household estimates of annual spending on unit renovation and maintenance ranged from 30 manats to 45,000 manats with a median of 3,000 manats. This implies that households are spending significant resources maintaining their own units. Nonetheless, only 3 percent of households were interested in getting a loan to improve their housing unit compared to 39 percent of households who felt they couldn't afford a loan and 25 percent who don't like taking loans as shown in Figure 33. Furthermore, nearly 75 percent of interviewed households said they would be unwilling to pay for upgrades to the common areas of the building or to improve structural quality. Those that were willing to pay were only interested in paying less than 100 manats. The willingness to pay for upgrades warrants further exploration to better understand what households would be willing to do if they fully understand the issues with their current housing conditions.

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[27] This is a subcategory of five-story pre-1990 units known locally as "French".

Figure 33: Household Interest In Loans For Existing Housing Unit

	Nasimi		Khatai	Total
	MD 3	MD 4	Ahmadli	
Interested in getting a loan	5%	2%	4%	3%
Don't like getting a loan	32%	14%	28%	25%
Can't afford a loan	26%	44%	47%	39%
Housing is in good condition	38%	41%	21%	33%

Source: World Bank household survey 2020 conducted by Synergetics

The household survey confirmed issues with buildings that need to be addressed despite households' low willingness to pay for building-wide improvements.

Conclusion: Combined Assessment of Housing Market Demand

The combination of the three-part assessment reveals housing conditions that will require capital repairs on a vast majority of pre-1990 MFB and a large share of informal single-family houses in both districts. Deferred maintenance on pre-1990 MFB has not yet caused large enough structural issues to warrant widespread demolition, but if left unmitigated will become a much larger problem in the next 10 to 15 years. In particular, 95 percent of pre-1990 MFBs, that account for approximately 48 percent of the housing stock in Baku, had external evidence of maintenance issues.[28] A majority of single-family houses are also in poor condition. Households in these typologies will need support to improve units or a means of participating in a redevelopment or relocation program.

Fewer households were living in overcrowded conditions than national levels, 18 percent compared to 26 percent. Only 15 percent of sampled households listed too little space as a top issue with their housing unit. Furthermore, the semi-structured interviews indicated that households are interested in purchasing small units. This preference may reflect the high price of housing more than household preferences for overcrowded conditions.

Connection to utility services is not an issue but the quality of water and sewer connections is an unaddressed issue along with the provision of quality education and neighborhood safety. As indicated in the stocktaking and confirmed by the rapid assessment, the residential housing stock does not have issues with connections to utility services. However, the rapid assessment did reveal issues with water intrusion and sewerage issues in many housing units that likely require a combination of individual building improvements and overall upgrading of the utility grid. More investigation is required to fully understand this issue. Stakeholders and households also identified issues with access to quality neighborhood schools, particularly in Khatai. Another issue, particularly in Nasimi, was security risks and the presence of drug users. Investment is needed to maintain neighborhood infrastructure as suggested by the concerns about schools and community safety.

Neither the households nor the HOAs are positioned to manage the required maintenance program. As indicated by the semi-structured interviews with ZhEK leaders, the ZhEK system is not currently financially solvent leading to struggles with maintaining pre-1990 MFBs. Also, households do not have the resources or motivation to pay for structural maintenance in pre-1990 MFBs. A combination of actions could help to overcome this stalemate. The first is an information campaign and continued assessment of individual buildings that identify the long-term issues affecting these buildings. Additionally, more government incentives to upgrade existing units could encourage private sector investment in upgrading. Further exploration of the implementation mechanisms and program designs for this type of program is required.

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[28] World Bank Group. 2020. Earthquake Risk in Multifamily Residential Buildings: Europe and Central Asia Region. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/34439 License: CC BY 3.0 IGO. 9

There is demand for a more cooperative redevelopment and renovation program that involves households. Both households and stakeholders indicated that the past programs have been effective but need to better involve households to solve structural maintenance and funding issues. As the government improves its monitoring and evaluation of the residential building stock, it will be possible to determine the redevelopment or renovation needs of individual MFBs and single-family homes. The government could develop a process of engaging households whose housing units have been designated for redevelopment or renovation to ensure community buy-in.

The limited capacity of households to purchase market-rate units implies a demand for more affordable units or financing structures than is currently being supplied. The household survey indicated that 20 percent of households were interested in buying new housing units but were only able to purchase units at prices well below current market rates. Accommodating these households would require different subsidy programs than are currently available.

5. Roadmap for Improving Housing Market Responsiveness

Immediate and Long-Term Action

The government may consider the potential cost savings to the economy if widespread housing quality issues are addressed soon. For example, a rough estimate of the cost of replacing 48 percent (estimated % of pre-1990 MFBs) of existing square footage in Baku would cost $6.8 billion to $7.76 billion. The estimate is based on prevailing construction costs of $350-$400 per meter. In contrast, it would cost $192 - 224 million to provide minor renovations to 16 percent of the stock at $30-$35 per meter. Renovating the remaining 32 percent of the stock with major renovations would cost between $1.92 and $2.56 billion. These rough estimates demonstrate the potential cost savings of acting today to avoid having to replace a large share of units in the future.

To better understand housing demands and needs, the government may consider scaling up and adapting the rapid assessment tool by supporting district governments to collect data. The data collection process should be repeated on an annual or semi-annual basis to gauge progress and changes in housing conditions. In the long term, the government should include more detailed information about building units and household conditions in the Census and other Statistics Committee data collection mechanisms.

After evaluating the current government programs and determining an implementation plan, the government may consider expanding support programs for pre-1990 MFBs and informal single-family houses as its highest priority immediate action. The first program line should provide support for pre-1990 MFB renovation and energy efficiency as well as disaster-risk mitigation improvements. The program could address investment in programs to support three different areas of action for pre-MFB: minor renovation, major retrofit/renovation, and demolition and resettlement. The second program line would support individual households in hazardous areas – there are well-known and continued issues in households living in severely degraded single-family homes that need to be renovated. A third program would continue to formalize and bring single-family homes in informal areas up to code. These programs could include a mix of financial and policy incentives to support increased private investment.

Another high-priority action for the governmental consideration is to continue to expand their affordable housing program in conjunction with a more participatory program for households living in MFBs or single-family homes in need of demolition. As detailed in an earlier World Bank analysis, the MIDA affordable housing program is commendable but there is room to improve pricing and targeting. Overall, the government should focus on the issues in Baku but continue to monitor and develop support models for

other cities. MIDA may consider evaluating the feasibility of offering rental units on both a traditional lease and a rent-to-own basis.

Over the long term, the government may consider continuing to support the expansion of mortgage products to accommodate lower-income residents as well as rehabilitating existing housing stock. Programs for existing and new housing stock need to leverage financing instruments to ensure government support is well utilized. Given the size of the current mortgage market, this expansion should be expected to occur over a long period. Nonetheless, it will require continued support and cooperation between various members of the Housing Commission and other private sector financial institutions to provide instruments that would enable housing cooperatives to renovate their multifamily buildings.

Impact of COVID on Roadmap

The COVID-19 pandemic continues to have large impacts across many sectors of the Azerbaijan economy but is creating more acute affordability issues in the housing sector. As mentioned above, a large share of surveyed households was having difficulty in paying rent or mortgages due to the impact of COVID.

The affordability issues could be mitigated by continued and increased government support that would have positive multiplier effects on the economy overall. Much of Azerbaijan's growth in permanent employment growth was in the construction sector. Therefore, continuing to support housing will help keep these jobs and bolster the impact of government funding. Furthermore, if the government support expands to include more renovation and maintenance support, the local multiplier effects are large. Finally, in past disaster response operations, it has been easy to disburse funding to the housing and construction sector to ensure that government financial resources are not delayed in their support of households.

Appendix 1: Key Findings from Past Analytical Work

As the economies of European and Central Asian (ECA) countries liberalized after the fall of the Soviet Union, several problematic housing trends emerged in Azerbaijan. While significant progress has been made in reforming Azerbaijan's housing sector since the 1990s, it will take some time for the reforms to result in adequate housing conditions and access for all income groups. In the meantime, some of the older housing stock continues to deteriorate, and the formal housing sector continues to be unable to produce new housing of the composition, type, or price needed to respond to prevailing demand. As a result, housing choice is severely restricted for both low and middle-income households, forcing households into often substandard housing solutions.

Faced with the growing challenges in the housing sector, the Government of Azerbaijan has been utilizing the technical assistance and advisory service from the World Bank for several years. The most recent work by the Bank, the Greater Baku Housing Sector Diagnostics (2015), and the Guidance for National Housing Strategy (2019), informed the National Housing Strategy. The challenges in the housing sector that the Strategy aims to address, identified through previous analytical work by the Bank, include:

1) **Deteriorating pre-1990 MFB stock:** A large proportion of the existing housing stock is in poor condition after decades of deferred maintenance. Without a comprehensive building inventory, it is difficult to determine the scale of the problem or assess which buildings are obsolete.

2) **Unmitigated disaster risks:** Some houses constructed before 1990 — multifamily and single-family homes — may be structurally vulnerable to earthquakes and/or landslides. Determining the scale of the issue is difficult because there is no comprehensive inventory and most older buildings do not have documentation of their structural integrity or seismic safety. The most critical aspects requiring attention are, inter alia, outdated seismic hazard maps not in line with accepted standards, inadequate risk mitigation measures, and lack of public awareness.

3) **Underdeveloped rental market:** High ownership rates and the reliance on real property as a private savings and investment mechanism have suppressed the rental market. Together with the deep-rooted culture of homeownership, this has contributed to the underdevelopment of a rental market for lower-income groups. The rental market is currently largely informal, culturally stigmatized, and not covered effectively by any normative rental laws and regulations.

4) **Unregistered housing development:** Azerbaijan's urban population growth has not been matched by new supply in the formal housing sector and this has led to almost 30 percent of the national population living in unregistered housing units. In February 2019, Presidential Degree No. 529 required MFB aims to resolve issues with formal registration. Many MFBs in Baku have been registered.

5) **Limited access to housing finance:** Mortgage penetration has been low, albeit improving. Factors contributing to the low penetration include, *inter alia*, commercial banks' perception of inflation and instability in the housing market, limited liquidity of households, and lowering of the effective loan amount due to the high incidence of unreported household income.

6) **Fragmented institutional framework:** Institutional responsibility of the housing sector is fragmented across multiple ministries and departments. Effective coordination is particularly important in the context of disaster risk management in the housing sector since the roles and responsibilities of systematic risk assessment and risk reduction in housing are not currently clearly defined.

With the imminent approval of a national housing strategy, the Government of Azerbaijan is preparing to implement the strategy through the development of targeted policies and programs. Such policy and program development require an understanding of different households' diverse needs. Given the diversity of needs, different policies need to address different segments of the market from low income to high income.

Appendix 2: Data Request

Section	Indicator	National	Regional
Demographic	Population, total	Yes	Yes
Demographic	Population, households	No	No
Demographic	Population, cohabitating	No	No
Demographic	Population growth by household	No	No
Demographic	Tenure status by age (renter, owner, etc)	No	No
Demographic	Age distribution	Yes	Yes
Demographic	Poverty Rate	Yes	No
Demographic	Change in poverty rates	Yes	No
Demographic	Internal population movement	Yes	Yes
Demographic	Household size	Yes	Yes
Economic	Employment by industry	Yes	Yes
Economic	Household income distribution	Yes	Yes
Economic	Household income by age	No	No
Economic	Household income by tenure	No	No
Economic	Average annual wages by industry	Yes	No
Economic	Total employment growth	Yes	Yes
Economic	Unemployment rate	Yes	Yes
Economic	Average wage growth	Yes	Yes
Economic	Household expenditure on housing (national and other relevant geographic units)	No	No
Economic	Household savings rate	No	No
Financing	Price of materials	No	No
Financing	Price index of construction materials	No	No
Financing	Number of mortgage loans	Yes	No
Financing	Annual growth in mortgage loans	Yes	No
Financing	Average size of loans	No	No
Financing	Average LTV	No	No
Financing	Interest rates	No	No
Housing Stock	Total units	Yes	No
Housing Stock	New units per year	Yes	No
Housing Stock	Total new units by income type or rental rate	No	No
Housing Stock	Total new units by tenure (single family vs multi family)	No	No
Housing Stock	Total new units by size of building (number of units)	No	No
Housing Stock	Inventory of new vs existing housing for sale	No	No
Housing Stock	Vacant units	No	No
Housing Stock	Total units by classification (rural vs urban)	No	No
Housing Stock	Total square meters of housing	Yes	Yes
Housing Stock	Total units by number of rooms	No	No
Housing Stock	Tenure by year structure built	No	No
Housing Stock	Tenure by units in structure	No	No
Housing Stock	Tenure by occupants per Room	No	No
Housing Stock	Average rent across muncipalities	No	No
Housing Stock	Rent to income ratio	No	No
Housing Stock	Average market price	Yes	Yes
Housing Stock	Market Value Growth of owner occupied units	Yes	Yes
Housing Stock	Absorption of recently completed rental and owner occupied housing	No	No
Housing Stock	Permits for new construction of housing	Yes	Yes
Housing Stock	Units in need of replacement (ie natural disaster risk, condemnation, abandonment, etc)	No	No
Housing Stock	Access to services	Yes	Yes
Housing Stock	Building Quality	No	No
Housing Stock	Overcrowding rate	No	No

Appendix 3: Stakeholder Interview Approach

Overall Approach

The consultancy firm conducted **semi-structured individual interviews** with **14** key informants, including:

- Brokers – 2-3 per district

- District level Executive Branch- Deputy in charge of housing and architect – 1 per district

- Appraiser – 1 per district

- Developer or construction contractor – 1 per district

- HOA/ZhEK/community leaders - 1-2 per district

The interview framework provided a mixture of (i) semi-structured questions, designed to collect specific information on key-informants groups' objectives, resources, and activities, and (ii) more open-ended questions, designed to encourage key-informants to discuss local issues more broadly. As a result of interviews, the firm provided full transcripts of the interviews in the format specified by the WB.

The questions were as follows:

District level Executive Branch- Deputy in charge of housing and architect

1. How long have you been working in this district?
2. How is the population changing in the district?
3. How has the district changed overall in the last 5 years? (improved, remained the same, deteriorated)
4. How has the selected neighborhood changed in the last 5 years?
5. What is the general income level of the selected neighborhood (mixed, low, middle, high income)?
6. What is your sense of current property price levels in your district (Very Expensive, Expensive, Fair value, Cheap, Very Cheap)?
7. How do property prices vary across different micro-districts or neighborhoods?
8. How do you expect property prices to change over the next 12 months? (% band, range options)
9. How do you expect average rents, in your area, to change over the next 12 months?
10. What are the biggest issues in the district and selected neighborhood?
11. What are the most common concerns you hear from citizens of your district?
12. What are the biggest residential maintenance issues in the district?
13. What do you think the executive authority or government could do to help resolve these issues?
14. What are the seismic, flood, landslide, and other climate and disaster risks in this neighborhood?
15. Do you have a sense of which buildings are specifically at risk in the event of a disaster?
16. What type of housing support do you think households are seeking the most: obtaining a new unit, funds for renovation, funds for a down payment, funds for rental payments, funds for paying utilities?
17. Do you have a sense of how much of the housing stock is unregistered?
18. Do you think the unregistered buildings are of lower quality?
19. Do you think people are willing to pay more for a properly registered house?
20. How strictly are the building codes and structural modifications enforced?
21. What are the issues related to enforcing building codes?
22. Can you share the accounting book for the district that would allow us to understand current building stock?
23. If not, how can we get a copy of the book?

24. Can you tell us how the buildings are cataloged in the book? How often it is updated? Are there building typologies?

Appraiser

1. What are common issues with the housing in this subdistrict/ neighborhood?
2. How many obsolete units do you see in this neighborhood?
3. Do you have a sense of how much of the housing stock is unregistered?
4. Do you think the unregistered buildings are of lower quality?
5. Do you think people are willing to pay more for a properly registered house?
6. What is the trend in market pricing?
7. How many units are you appraising here per month?
8. What is your sense of current property sales price levels being achieved in your area (Very Expensive, Expensive, Fair value, Cheap, Very Cheap)?
9. What other parts of the city/ districts do you work in?
10. What other parts of the city do you think are changing the fastest?
11. How do you expect prices to change over the next 12 months? (% band, range options)
12. How do you expect prices to change over the next 5 years? (% band, range options)

Developer or construction contractor

1. What type of projects are you doing in the neighborhood?
2. What type of unit is in most demand for rent/for sale (new construction, historic soviet buildings, etc.)?
3. What are the most typical types of renovations that people in old buildings do here?
4. Do you get requests for energy efficiency or seismic retrofits?
5. Do you have a sense that structural modifications common or uncommon in this neighborhood/district?
6. How have renovation projects changed over the last 5 years?
7. How have construction projects changed over the last 5 years?
8. What is the most expensive step in the construction process?
9. What are the housing issues you face in this neighborhood? City? Country?
10. What keeps you from delivering lower-cost units?
11. What is the cost per square meter to deliver each of the following types of units/projects?
    - luxury unit
    - middle-income unit
    - low-income unit
    - renovate an old unit
    - renovate the common area of a multi-family building
    - demolition
12. How have average prices for construction projects changed over the last 12 months?
13. How do you expect prices to change over the next 12 months? (% band, range options)
14. How do you expect prices to change over the next 5 years? (% band, range options)
15. What is your sense of current property sales price levels being achieved in your area?
16. What other parts of the city do you work in?
17. What other parts of the city do you think are changing the fastest?
18. Do you refer to the district accounting book to understand the existing housing stock and its' issues?
19. What might you do to improve information from the city on housing quality?
20. How would you identify buildings for demolition?
21. Do you have a sense of how much of the housing stock is unregistered?
22. Do you think the unregistered buildings are of lower quality?

23. Do you think people are willing to pay more for a properly registered house?
24. Do you have information on the seismic, flood, landslide, and other climate and disaster risks in this neighborhood?
25. How strictly are the building codes and structural modifications enforced by the authorities?
26. Do you have a sense that there is a low, medium, or high probability that in a high seismic event some of the houses in the neighborhood could partially or fully collapse and why?

Broker

1. How long have you been a broker?
2. How do customers find out about you?
3. How have new buyer enquiries changed over the year? (down/ same/ up)
4. What type of unit is in most demand for rent (new buildings nastoyka, stamina, Leningrad, experimental project, Khursheed project, French project, etc.)?
5. What type of unit is most in demand for purchase?
6. What type of unit is hardest to rent/sell (i.e. new buildings (novostroika), stalinka, leningradka, experimental project, Khrushchev project, French project, etc.)?
7. What is the general income level of the neighborhood (mixed, low, middle, high income)?
8. What is the biggest barrier for households looking to purchase in this district (unit type, unit size, price, location, supply, building condition, etc.)?
9. How do you expect prices to change over the next 12 months? (% band, range options)
10. How do you expect prices to change over the next 5 years? (% band, range options)
11. How do you expect sales to change over the next 12 months? (down/ same/ up)
12. Total number of unsold houses on books (level)?
13. How long does the average sale take from listing to completion (weeks)?
14. How have tenant inquiries and demand for rental units changed over the last 3 months? (down/ same/ up)
15. What is the biggest barrier for households looking to rent in this district (unit type, unit size, price, location, supply, building condition, etc.)?
16. How do you expect average rents, in your area, to change over the next 12 months? (% band, range options)
17. What do you expect the average annual growth rate in rents will be over the next 5 years in your area? (% band, range options)
18. What is your sense of current price levels being achieved in your area (Very Expensive, Expensive, Fair Value, Cheap, Very Cheap)
19. Do you have a sense of how much of the housing stock is unregistered?
20. Do you think the unregistered buildings are of lower quality?
21. Do you think people are willing to pay more for a properly registered house?

HOA/ cooperatives/ZhEK/community leader

1. How long have you been a leader of the HOA/community/ZhEK?
2. What is the general income level of households in the building (low, middle, high)?
3. What portion of the building's apartments are occupied (25%, 50%, 75%, etc.)?
4. Are most of the apartments occupied by more than one person?
5. Do most of the units contain one household or more?
6. How often do the units sell?
7. Do you think the value of the units has been increasing/decreasing/staying the same over the last 12 months?
8. What are the biggest issues facing the community?

9. What are the biggest concerns of residents?
10. How has this changed over the last 5 years?
11. What are the costs of managing the HOA?
12. What are on average the annual building expenses (staffing, maintenance, etc.)?
13. Is there building staff (i.e. doorman, building manager, maintenance manager, etc.)?
14. How do you cover the costs of managing the HOA?
15. Are you able to upgrade and maintain common areas?
16. Would the people in your building be willing to pay more to (select all that apply) make the building more efficient?
    - repair deferred maintenance (i.e. roof, stairs, plumbing)?
    - retrofit the building for earthquakes?
    - retrofit the building for flood protection?
    - Other (specify_____)
17. Are there plumbing issues?
18. Are there issues with electricity?
19. Are there issues with the heating system?
20. Do the people in your building have concerns about the structural safety of the building - including in the event of a disaster like an earthquake or flood?
21. Have structural modifications occurred in your buildings?
22. What is the construction material on the outside cladding of your buildings?
23. What is the construction material on the floor and roof of your buildings?
24. Is there availability of outdoor space with your buildings?
25. Does your HOA have an emergency/evacuation plan for your building - and is this promoted by the HOA?

Feedback from Pilot

The most difficult question to answer for developers and construction contractors was question 25. (How strictly are the building codes and structural modifications enforced by the authorities?). Respondents declined to comment on the Housing Code due to a lack of specificity and insufficient information about it. This question needs to be revised in future iterations of the tool.

Furthermore, the interviews should also include questions related to infill formal and informal development. These might include:
1. What are the steps, time, and cost of developing informal and formal infill housing?
2. Of the steps in the housing development described above, which do you think are the three most significant limitations or challenges? Why?
3. Of the three major challenges to housing development which do you think would be most easily reformed? Why?
4. In which areas do you think the actual practices and actions of developers differ most from the officially mandated process?
5. Do you think there are other significant roadblocks or constraints to new multifamily development?
6. How big a challenge is the size of most parcels to developing multi-family housing? How hard is it to assemble land?
7. Are there any programs to assist with land assembly?
8. How big a challenge is obtaining funding to maintain multifamily buildings?
9. Are there programs to assist with building maintenance?
10. If so, what are the challenges?
11. How are the regulations for owners' associations working well or not working well?

Appendix 4: Building Visual Assessment Approach

The consultancy firm (CST "Synergetics") implemented a World Bank methodology for undertaking a rapid non-engineering stock-taking (building visual assessment) of housing conditions in selected neighborhoods.

The visual building assessment is designed to provide insight into building conditions and deferred maintenance. It is not meant to replace a full building census but rather indicate the general condition of building maintenance in a given part of a municipality or town.
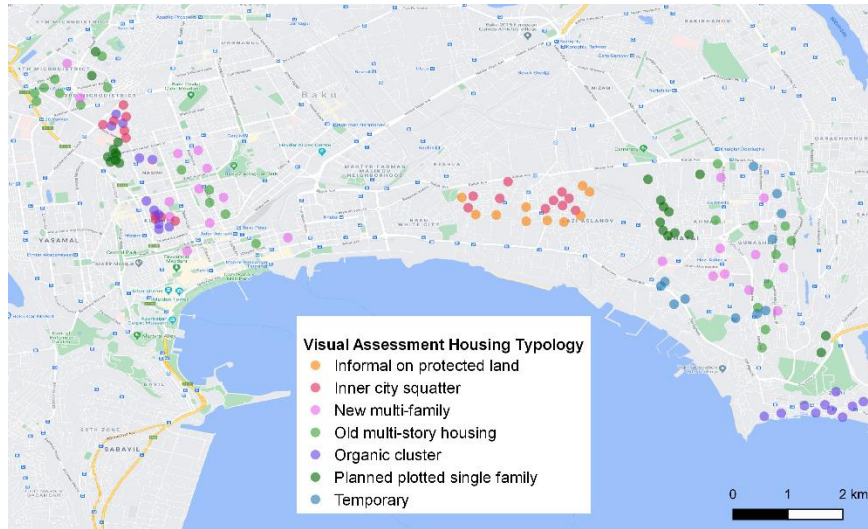To conduct the visual building assessment, the following steps were taken:

1. In the Nasimi and Khatai districts, the survey team determined the main housing typologies presented in the study area.
2. The survey team selected at least 10 buildings per housing typology to visually inspect with no more than one building per city block or approximately a 300-meter radius.
3. GPS location of the building was recorded and photos of the building facade are taken.
4. The survey team conducted a visual assessment using the guide provided by the World Bank and KoBo Toolbox application/ tool with the questions installed on the phones and computers.
5. In addition, the survey team documented any additional attributes or particularly useful elements of the building with photographs and a written explanation.

The pilot testing was very helpful in providing insight into building conditions and (with more training and increased usage) could serve as a useful tool. The pilot included questions about the enumerators' view on structural integrity and whether the building needed renovation or demolition. These questions are potentially very useful when a more detailed definition of each category is determined but at this time don't provide input that is useful for the assessment. Also, the facade deterioration question proved to be very useful and was recategorized as major or minor after fieldwork using the photos provided of each building. In the future, the questionnaire should include an assessment of whether the deterioration is minor or major.

The Building Visual assessment and usage of the KoBo toolbox application for data collection didn't reveal any major issues but was perceived as a helpful and user-friendly tool for collecting and managing data especially in challenging environments. The application/tool worked well both in online and offline mode. The only issue with the tool was using the GPS question and tracking GPS data on the map.

The support of the chief architects of both districts and the letter from MIDA was a great help during the assessment. The architects identified the addresses of the buildings by category in the district and involved their local representatives as guides. During the assessment, interviews were conducted with the commandants or residents of the buildings and questions were well received. It should be noted that, unlike Khatai district, Nasimi district is relatively small, so it was not possible to comply with the 300 m distance limit requirement between the buildings of different categories inspected. Such cases should be taken into account and appropriate changes should be made in terms of future assessments.

Visual Assessment Housing Typology
- Informal on protected land
- Inner city squatter
- New multi-family
- Old multi-story housing
- Organic cluster
- Planned plotted single family
- Temporary

Building Survey 8/10/20 Updated

Building Exterior

Which District is the building in?

◯ Nasimi

◯ Khatai

Please take a picture of the front of the building

Click here to upload file. (< 5MB)

Please take a picture of the side of the building

Click here to upload file. (< 5MB)

Please take a picture of the other side of the building

Click here to upload file. (< 5MB)

Finally, if possible, please take a picture of the back of the building

Click here to upload file. (< 5MB)

Collect the GPS coordinates of this building.

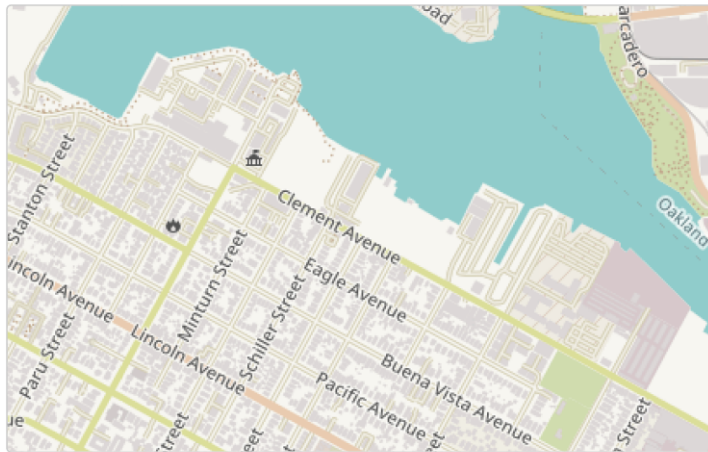latitude (x.y °)

longitude (x.y °)

altitude (m)

accuracy (m)

What types of uses are evident in the building?

Select all that apply

☐ Commercial - Includes retail and wholesale businesses, financial institutions, restaurants and parking structures

☐ Industrial - Includes factories, assembly plants, and heavy manufacturing facilities

☐ Office

☐ Warehouse - Includes both large warehouses where items stored and commercial warehouses were items are sold

☐ Residential

Approximately how many residential units are in the building?

Note that if the building is a single family home then there is one unit.

_____

What is the building typology?

○ Old multi-story housing - 2- 9 stories, soviet style prefab housing, parking plot within often referred to as khrushevka, leningradki, kiev projects, etc.

○ New apartment building - more than 9 stories, on street parking

○ Planned plotted housing - mostly single family housing, uniform size plots, good landscaping

○ Organic cluster housing - mix of unplanned narrow roads and pedestrian pathways with informal plot sub-divisions, houses close together with limited ventilation, unauthorized additions

○ Temporary housing - dilapidated facade, improvements in adjacent areas

○ Inner city squatter housing - high density housing, no visible roads, varying roof types, temporary materials, encroached courtyards

○ Informal housing on protected land strips - adjacent to exposed oil-wells, temporary dirt roads becoming permanent, irregular plot sizes

○ Other - none of these apply

What is the sub-type of old multi-family building?

○ Krushevka - soviet 5 story

○ Leningradka - soviet 9 story

○ Kiev - soviet 9 story

○ French - soviet 5 story

○ Stalinka - soviet 3 or 5 story

○ German - soviet 3, 4 or 5 story

○ Experimential - soviet 3 or 5 story

○ None of these are applicable

You selected other. Please describe why it did not fit existing typology or how you would classify the building.

_____

How many stories are there above ground?
As a general rule, the largest number (that is, count floors from the downhill side to the highest roof) should be used.

_____

How many stories are there below ground?
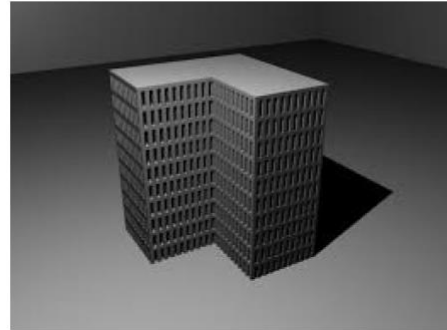*If you are not able to enter or discern from your assessment leave then answer with NA*

_____

What is the shape of the building?

You may need to walk around the building to establish the shape which can be for single or multi-story building
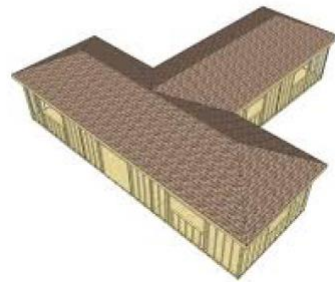
○ L-shaped

○ Wedge shaped

○ T-shaped

○ U-shaped
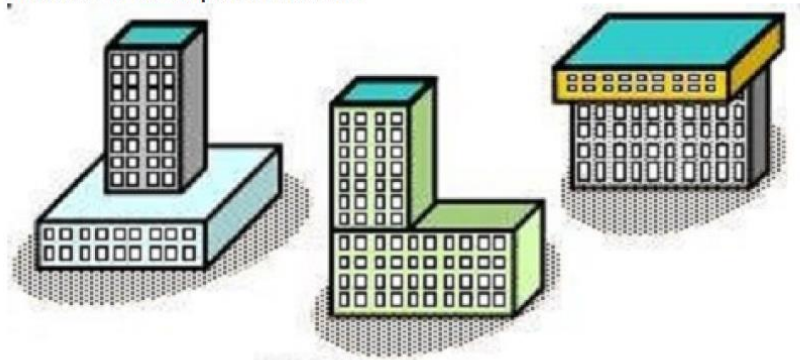
What is the approximate age of the building?

◯ before 1950

◯ 1950 - 1990

◯ 1991 - 2010

◯ after 2010

Is the building detached?

The building is detached if it does not share a wall with an adjacent building with a different address

◯ Yes

◯ No

Presence of out-of-plane setbacks?

Considered severe vertical irregularity when setback is greater than or equal to 1 meter so that one story is not aligned vertically with seismic force above or below. In severe cases, walls at upper story are outboard of walls below.

◯ Yes

◯ No

Presence of a soft-story?

Soft-Story Buildings

2 + Stories

Multiple Units

Large Open Spaces on the Ground Story
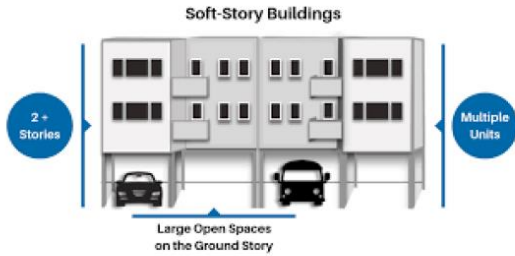
A soft story building is a multi-story building in which one or more floors have windows, wide doors, large unobstructed commercial spaces, or other openings in places. A typical soft story building is an apartment building of three or more stories located over a ground level with large openings, such as a parking garage or series of retail businesses with large windows. Buildings are classified as having a "soft story" if that level is less than 70% as stiff as the floor immediately above it, or less than 80% as stiff as the average stiffness of the three floors above it.

◯ Yes

◯ No

Presence of heavy overhangs?

There is an unbraced unreinforced masonry parapet or heavy canopy over exit doors or pedestrian walkways that appears inadequately supported

◯ Yes

◯ No

Presence of new facade cladding?

Older buildings facade has been upgraded while bakc of building may remain in disrepair

◯ Yes

◯ No

Is there evidence of facade deterioration?

Are there visible cracks in the facade? Are there clear construction joint failures?

◯ Yes

◯ No

◯ Not Applicable

Estimate the distance in centimeters between building a adjacent buildings

_____

Are there clear issues from adjacent building?

Issues that can be identified from inspection include a building that is a taller that inspected building with an unanchored un-reinforced masonry wall or unbraced parapet or chimney

○ Yes

○ No

○ Unclear

What is the construction material of the outer walls?

○ Masonry - wall comprised of brick, stone or cement blocks

○ Un-reinforced masonry - brick construction with some of the following: visible tie plates, deeply recessed windows, every 4-7 rows there is a "king row" with "ends" ends of bricks

○ Reinforced concrete frame - beams and columns connected as frames

○ Large-panel buildings - prefabricated floor-to ceiling-height faced panels with additional steel reinforcement around windows
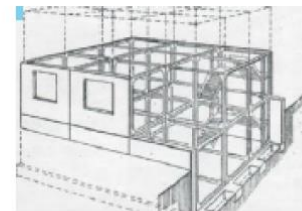
○ Precast boxes - similar to LPBs but prefab elements are smaller - four elements surrounding window

○ Timber - often seen in single family houses but may be difficult to determine from visual assessment

○ Temporary materials - often seen in informal areas and may include tin sheets

○ Other - a material different than the options provided

○ Unclear - if you just can't tell what material was used

You selected other. Please describe the other material.

_____

Is the same structural material system used on all levels?

○ Yes

○ No

Is there evidence of illegal antennae or other electrical connections?

○ Yes

○ No

Are you able to gain access to interior?

○ Yes

○ No

Building Interior

Working elevator?

○ Yes

○ No

○ Not Applicable

Condition of stairwell?

○ Good

○ Moderate

○ Poor

Condition of hallways?

○ Good

○ Moderate

○ Poor

Is there evidence of hallway wall deterioration?

Are there visible cracks in the walls or ceiling?

○ Yes

○ No

○ Not Applicable

Is the lighting in the hallways and common areas functioning?

○ Yes

○ No

○ Unclear

Evidence of exposed wires in the common areas or hallways?

○ Yes

○ No

Please take a picture of the wires.

Click here to upload file. (< 5MB)

Evidence of mold or other water damage in the hallways and common areas?

○ Yes

○ No

Please take a picture of the mold.

Click here to upload file. (< 5MB)

Were there any broken windows?

○ Yes

○ No

Approximately what share?

○ 25 %

○ 50 %

○ more than 75%

○ Unclear

Is there evidence of discoloration around windows?

Clear water leakage around windows in common areas/hallways

○ Yes

○ No

Is there evidence of recent leaks in the roof/ceiling?

○ Yes

○ No

Is there evidence of operable heating system?

○ Yes

○ No

○ Unclear

What type of trash removal system do they have?

☐ Common trash bins onsite

☐ Common trash bins offsite

☐ Individual trash bins - evidence of a trash can per unit

☐ No evidence of trash system

What is the condition of the trash collection area?

○ Good

○ Moderate

○ Poor

Is there parking in the building?

○ Yes

○ No

○ Unclear

Estimate the number of parking spaces

_____

Thanks! That completes the structured assessment of building. Please take a moment to make some overall judgements.

Overall opinion of condition of building?

◯   Good - building is well maintained, with clean common areas and no signs of exterior issues

◯   Moderate - shows signs of deferred maintenance that could be feasibly be repaired with no major structural issues

◯   Poor - shows obvious signs of deterioration to the major structural elements that cannot be feasibly repaired

Overall opinion of structural integrity?

Include load path, construction quality and material quality

◯   Good

◯   Moderate

◯   Poor

Based on your assessment what would be your overall recommendation for building?

☐   No investment necessary

☐   In need of structural retrofit or major renovation

☐   In need of demolition due to degree of disrepair or hazards

☐   Not able to make a judgement based on assessment

Do you have any other observations?

_____

Did you have any issues that you would like to mention?

_____

Appendix 5: Household Survey Approach

Three neighborhoods have been selected in Nasimi and Khatai districts of Baku city as the target for the housing demand/needs assessment to take place. The selection criteria agreed with the government counterparts, are below. The neighborhoods are: 1) Ahmadi settlement (in Khatai district); 2) 3rd micro-district (in Nasimi district); and 3) 4th micro-district (in Nasimi district).

- The selected neighborhoods should capture at least 20 % of the total number of households in each district.

- Each selected neighborhood should be no more than a 30-minute walk from one side of the neighborhood to the other.

- One or two of the selected neighborhoods should have more than 40% of their housing stocks categorized as informal (unregistered).

- All selected neighborhoods should have at least 50% of their housing stock categorized as Multi-Family Buildings (MFBs), but also include other common housing typologies (e.g. detached home).

- All selected neighborhoods should have at least 50% of their residents classified as lower-middle to low-income groups.

The proposed sampling methodology for this survey was based on the standard research sampling procedures and the consultant's wide experience in conducting quantitative and qualitative surveys, namely a composite of past proposals where the effectiveness and validity have been proved in practice. The sampling approach during this assessment was purposeful sampling. A purposeful sample was a non-probability sample that is selected based on the characteristics of a population and the objective of the study.

The households for the survey were selected among the existing households in the selected neighborhoods. The consultancy firm selected multifamily buildings and detached homes across the neighborhood.

Four hundred households were tentatively divided into three parts with about 132-133 interviews in each selected neighborhood. Among 400 HHs selected for the survey, at least 50% need to be from lower-middle to low-income groups. The survey team ensured a variety of housing typologies during the household survey.

The WB experts provided the Household survey questionnaire to the survey team and the local expert. The latter was responsible for adapting the questionnaires to the local context and revising them after the pre-test. The pre-test of the HH questionnaire among 12 various households was conducted by the survey team from the consultancy firm Synergetics. The purpose of the pretest of the questionnaire was to see if the questions/answers are well designed and to determine the length of the interview. CST Synergetics translated the questionnaires into Azerbaijani.

The data from the Household Survey were entered into the SPSS program database that was prepared by the WB local expert and copied to each Data entry Operator's computers. The data entry operators were responsible for performing immediate consistency checks and for entering data into the SPSS database from questionnaires. The interviewers collected data using the paper questionnaire. Data from the questionnaires were entered for each household in the order they are collected (i.e. in the order that they are arranged in the questionnaire).

Given the interviewers' prior experience with surveying households, where they noticed a decreasing willingness to participate in surveys, the team made every attempt to keep the survey short and concise. Nonetheless, in analyzing the data it is clear that a few additional questions should be added if the survey is used again in the future including:

1. Does your household want to move to a different housing unit?
2. What is holding you back from moving?
3. What is your household monthly income? (Currently, government restriction does not permit asking this question)

HOUSEHOLD QUESTIONNAIRE							
IDENTIFICATION							
STREET NAME /HOUSE NUMBER/ BLOCK NUMBER:							
RESPONDENT'S FLOOR NUMBER:							
NAME OF HOUSEHOLD HEAD:							
TELEPHONE NUMBER:							
INTERVIEWER OBSERVATIONS							
NUMBER OF HOUSEHOLDS IN THE HOUSING UNIT							
TOTAL NUMBER OF HOUSEHOLD MEMBERS							
TOTAL NUMBER OF HOUSEHOLDS IN THE UNIT							
EVALUATE HOUSEHOLD INCOME LEVEL Low – less than 700 manat per hh per month Middle – 701- 1300 per hh per month High – 1301 or more per hh per month	LOW	MIDDLE	HIGH				
EVALUATE HOUSEHOLD LIVING CONDITIONS Low – overcrowded, visible maintenance issues, poor quality common areas Middle – smaller unit, some maintenance issues, limited common area issues High – extra space, no clear maintenance issues, no common area issues	LOW	MIDDLE	HIGH				
HOUSING TYPE							

SOVIET MULTI FAMILY 5 STORY "KHRUSHEVKA" PROJECT	1	SOVIET MULTI FAMILY 9 or 10 STORY "EXPERIMENTAL" PROJECT	9
SOVIET MULTI FAMILY 9 STORY "LENINGRADKA" PROJECT	2	TEMPORARY HOUSING/ COLLECTIVE HOUSES/ DORMITORIES	10
SOVIET MULTI FAMILY 9 STORY "KIEV" PROJECT	3	MULTI-FAMILY MODERN HOUSING COMPLEXES (NOVOSTROIKA)	11
SOVIET MULTI FAMILY 5 STORY "FRENCH" PROJECT	4	COMPANY HOUSING (SOCAR, COOPERATIVES, ETC.)	12
SOVIET MULTI FAMILY 3 OR 5 STORY "STALINKA" PROJECT	5	PUBLIC / SOCIAL HOUSING (FOR IDPS, OTHER VULNERABLE GROUPS)	13
SOVIET MULTI FAMILY 3,4 OR 5 STORY "GERMAN" PROJECT	6	INFORMAL PLOTTED HOUSING	14
SOVIET MULTI FAMILY 3 OR 5 STORY "EXPERIMENTAL" PROJECT	7	SINGLE-FAMILY DETACHED HOME (PRIVATELY OWNED)	15
SOVIET MULTI FAMILY 5 STORY "LENINGRADKA" PROJECT	8	OTHER (SPECIFY) _____	16

INTERVIEWER'S VISITS	1	2
DATE		
TEAM		
INTERVIEWER		
SUPERVISOR		
RESULT CODE		

1	COMPLETED
2	UNAVAILABLE AT HOME
3	POSTPONED
4	REFUSED
5	DWELLING VACANT/DWELLING NOT FOUND
6	OTHER _____